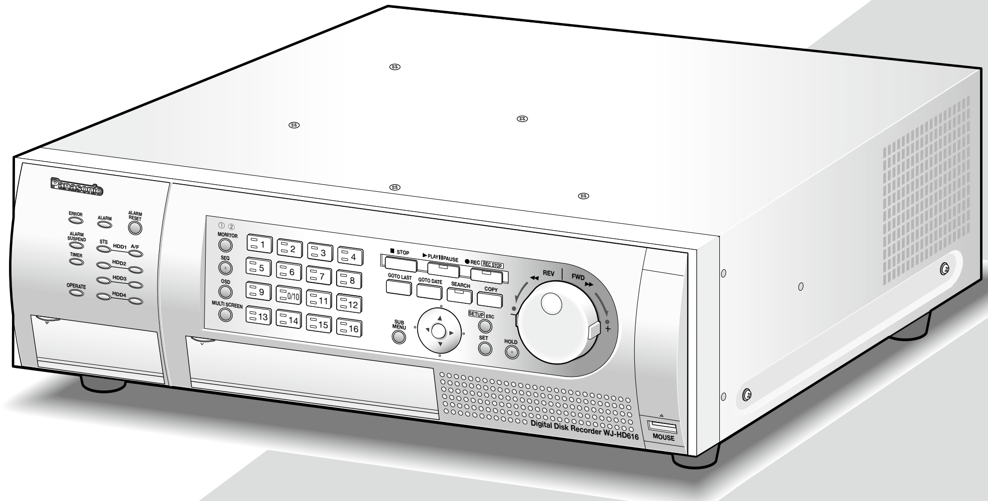
Panasonic

Operating Instructions

Digital Disk Recorder

Model No. WJ-HD616K
WJ-HD716K
WJ-HD616K/G
WJ-HD716K/G


ERROR
ALARM
ALARM RESET
ALARM SUSPEND
STS
TIMER
HDD1
HDD2
HDD3
HDD4
OPERATE
MONITOR
SEQ
OSD
MULTI SCREEN
STOP
PLAY/PAUSE
REC
REC STOP
GOTO LAST
GOTO DATE
SEARCH
COPY
REV
FWD
SUB MENU
SETUP
ESC
SET
HOLD
MOUSE
Digital Disk Recorder WJ-HD616

This illustration represents WJ-HD616K.

Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

No model number suffix is shown in this manual.

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Preface

The digital disk recorder WJ-HD616K, WJ-HD716K, WJ-HD616K/G and WJ-HD716K/G (hereinafter WJ-HD616K or WJ-HD716K), are designed for use within a surveillance system, and record images from up to 16 cameras on the hard disk drives.
This product supports HDMI (High-Definition Multimedia Interface) standard which allows displaying playback/live images with superior quality when connecting to a high-definition monitor using an optional HDMI cable.
It is possible to operate cameras from this product to display images from multiple cameras or switch cameras from which images are to be displayed, etc.

About the user manuals

The following 3 manuals are provided for the WJ-HD616K and the WJ-HD716K.

Installation Guide:	Contains descriptions of how to install/connect this product and how to configure the required settings.
Operating Instructions (PDF) (this document):	Contains descriptions of how to operate this product. (Both operations using the interface on the product and using a PC via a network are provided)
Quick Reference Guide:	Contains descriptions of how to configure the basic settings and to operate functions frequently used.

Adobe® Reader® is required to read the PDF files on the provided CD-ROM. When Adobe® Reader® is not installed on the PC, download the latest Adobe® Reader® from the Adobe web site and install it.

This product is described as "HD616K" or "HD716K" in the manuals and on the setup menus.
Refer to "readme.txt" on the provided CD-ROM for further information about the optional dedicated software, compatible cameras and their versions.

A DVD drive (WJ-HDB611) and RAID board (WJ-HDB601) are optional.
When these optional products are installed, the following functions will become avaialable.

- Built-in DVD drive: Copying of recorded images and audio onto a DVD disc
  Playback of recorded images and audio copied on a DVD
- RAID board: Switching of the operational mode to RAID 5 or RAID 6 and running system with RAID 5 or RAID 6

In these operating instructions, instructions are provided on the assumption that both the optional DVD drive and RAID board are installed.

System requirements for a PC

It is recommended to operate this unit using a PC that meets the following system requirements.

OS:	Microsoft® Windows Vista® Business SP1 (32-bit) Microsoft® Windows® XP Professional SP3 Microsoft® Windows® XP Home Edition SP3
CPU:	Intel® Core™ 2 Duo 2.66 GHz or faster
Memory:	1 GB or more (512 MB or more when using Windows® XP)
Monitor:	1 024 x 768 pixels or more, 24-bit True color or better
Network interface:	A 10/100 Mbps network interface card must be installed.
Web browser:	Windows® Internet Explorer® 7.0* Microsoft® Internet Explorer® 6.0 SP3
Audio:	Sound card (When using the audio function)

Other: CD-ROM drive: It is necessary to refer to the operating instructions on the provided CD-ROM.
DirectX® 9.0c or later
Adobe® Reader®: It is necessary to refer to the operating instructions on the provided CD-ROM.

* When using Microsoft® Windows® Vista®

Important:

- If using a PC that does not meet the above system requirements, it may cause problems such as slow imaging or the browser becomes inoperable.
- Audio will not be heard if a sound card is not installed on a PC.
- Microsoft® Windows® XP Professional x64 Edition is not supported.

Note:

- Refer to "Notes on Windows Vista®" (PDF) on the provided CD-ROM for further information about system requirements for a PC and precautions when using Microsoft® Windows Vista®.

Trademarks and registered trademarks

- Adobe, Adobe logo and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- Microsoft, Windows, Windows Vista, Internet Explorer, ActiveX and DirectX are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.
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- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- SDHC logo is a trademark.
- Other names of companies and products contained in these operating instructions may be trademarks or registered trademarks of their respective owners.

Abbreviations

The following abbreviations are used in this manual.
Microsoft® Windows Vista® Business SP1 (32-bit) is described as Windows Vista.
Microsoft® Windows® XP Professional SP3 and Microsoft® Windows® XP Home Edition SP3 are described as Windows XP.
Windows® Internet Explorer® 7.0 and Microsoft® Internet Explorer® 6.0 SP3 are described as Internet Explorer.
SDHC memory card and SD memory card are described as SDHC/SD memory card.

Restrictions upon display of images

When displaying images using this product, some functions have restrictions as follows. Before using this product, keep the following in mind.

When displaying live images from the camera on a web browser

- Black screen may be displayed for the first few seconds (*) when the following operations are performed while displaying live images.
  - When live images are displayed (by switching camera channel, etc.)
  - When image is zoomed in or out
- When displaying images sequentially, images may sometimes not be exactly displayed at the configured dwell time.

When playing recorded images

- Displayed playback time may be fast for several seconds (*) when the following operations are performed while playing recorded images.
  - When camera channels are switched
  - When image is zoomed in or out (When operating to zoom in/out a paused recorded image, image of several seconds later than the displayed image may be zoomed in.)
  - When the [PLAY] button is clicked again while playing images
  - When the first frame is displayed by starting the frame by frame playback during pausing
- Playback may be performed in several seconds intervals (*) when the following operations are performed. Refer to the "Functions during playback" section on pages 40 - 41 for how to control playback.
  - Fast playback/Fast reverse playback
  - Reverse frame playback
- When playing images by designating time and date, playback may start from a point several seconds (*) after the designated time and date or from the first frame of the next record.
- When playing images after searching for the latest recorded images, playback may start from a point several seconds (*) before/after the start time and date of the latest recorded images.

When recording images

- The actual time of recording trigger (event occurrence time, start time of the schedule recording, etc.) and the recording start time (time displayed on the recording event list) may not exactly be the same.
- When pre-event recording is set to be performed, pre-event recording duration may be longer than the set duration.

When copying images

Copying of recorded images may start from a point several seconds (*) before the designated start time when copying recorded images.

When downloading recorded images

Downloading of recorded images being played may start from a point several seconds (*) later than the designated start time when downloading recorded images being played.

When transferring images recorded at an event occurrence to the FTP server

Duration of images to be transmitted to the FTP server, which are recorded at an event occurrence, may not be exactly the same as the duration set for "Duration-Pre" and "Duration-Post".

* Time (seconds) differs depending on the frame rate for recording.

Before using this product

Video Motion Detection (VMD) function

The VMD function of this product detects motions referring to changes of brightness in the areas set in advance.
The VMD function will not effectively work in the following situations or may sometimes be malfunctioning.

- When there is a very little difference in luminance (brightness) between a background and a subject
- When brightness of images is low such as at night
- When a subject moves very slow
- When a subject is very small
- When the amount of rays of light incidence changes frequently such as at a window or outdoor
- When light such as sunlight or car headlight comes from outside
- When a fluorescent lamp flickers
- When a subject has depth

When configuring the VMD settings, check the function performance both in daytime and at night after appropriately configuring the area settings and the sensitivity settings according to the camera installation conditions and possible movement of subjects. When the detection function does not work or false detection occurs, use a sensor separately.

Time display of recorded images

When displaying recorded images, the displayed time and date may sometimes skips. This is not malfunction. The displayed time and date on the monitor and the recorder may sometimes not be exactly the same. This is also not malfunction.

Black screen displayed when playing recorded images

In the following cases, a black screen may be displayed during playing recorded images. However, this is not malfunction.

- When changing camera channels or screen patterns during playback or pausing
- When skipping/reverse skipping during playback
- When fast forwarding/reverse fast forwarding during playback
- When the [GO TO LAST] button is pressed during playback on a multiscreen
- When going to the next recording event list by fast forwarding/reverse fast forwarding or skipping/reverse skipping during playback
- When playback operation is affected by another operation (such as when receiving multiple alarms sequentially or when copying is being performed simultaneously)

Recording mode

It is possible to directly connect up to 16 cameras to the recorder and record images from them on the hard disk drives.

The following recording modes are available.

Emergency recording:	Recording that is performed manually using an external switch, etc. when an emergency occurs
Manual rec. operation:	Recording that is started and stopped manually
Schedule recording:	Recording that is automatically performed at the designated time range on the designated day of the week
Event recording:	Recording that is automatically performed at an event occurrence (such as VMD, terminal alarm/camera site alarm, video loss, etc.)

Important:

- Recording may not be performed around for 1 second in the following cases. However, this is not a malfunction.
  - When the settings are changed and the setup menu is closed during recording
  - When the image capture size, image quality or the recording rate is changed during recording
  - When a post-event recording or an emergency recording starts/ends during recording

---

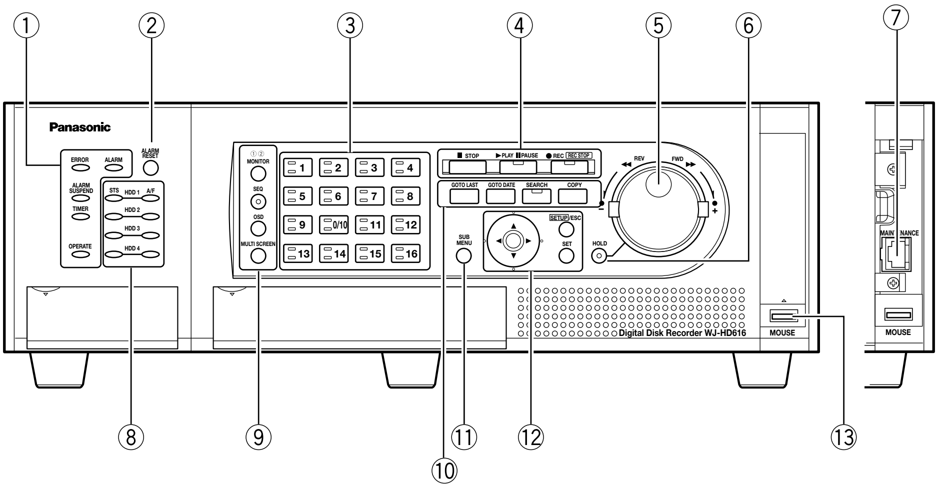
Event type

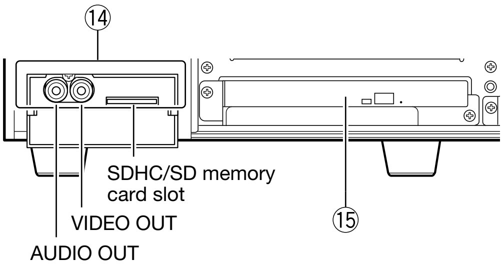
Event recording types displayed on a list on various windows are as follows.
MAN: Manual recording
SCH: Schedule recording
EMR: Emergency recording

The following are detailed event recording types.
VMD: Displayed when a motion is detected
LOSS: Displayed when a video loss occurred
COM: Displayed when a command alarm occurred
TRM: Displayed when a terminal alarm occurred
SITE: Displayed when a camera site alarm occurred
CMTN: Displayed when a motion is detected (SD5Link camera)
CRMV: When an object appears/disappears (SD5Link camera)
CSTY: Displayed when a staying object is detected (SD5Link camera)
CDRT: Displayed when a object moving to the specified direction is detected (SD5Link camera)
CTRM: Displayed when a camera terminal alarm occurred (SD5Link camera)
CSCD: Displayed when an interference with the camera is detected (SD5Link camera)
PRE: Pre-event recording

Major operating controls and their functions

Front view


①
②
③
④
⑤
⑥
⑦
Panasonic
ERROR
ALARM
ALARM RESET
ALARM SUSPEND
STS
HDD 1
A/F
HDD 2
HDD 3
HDD 4
TIMER
OPERATE
MONITOR
SEQ
OSD
MULTI SCREEN
1
2
3
4
5
6
7
8
9
0/10
11
12
13
14
15
16
STOP
PLAY PAUSE
REC
REC STOP
GOTO LAST
GOTO DATE
SEARCH
COPY
REV
FWD
SUB MENU
SETUP/ESC
SET
HOLD
MAINTENANCE
MOUSE
Digital Disk Recorder WJ-HD616
MOUSE
⑧
⑨
⑪
⑫
⑬
⑩


⑭
SDHC/SD memory card slot
VIDEO OUT
AUDIO OUT
⑮

① **Status indicators**

ERROR: Blinks when an error that can become a problem for the recorder to run the system occurs.

Blinks red: System error

Blinks orange: Thermal error, cooling fan malfunction, etc.

ALARM: Blinks when an alarm occurs, and lights when the alarm output stops. The blinking or lighting indicator will go off when the alarm reset button is pressed.

ALARM SUSPEND: Lights when the alarm suspension mode is selected. (☞ Pages 58 and 102)

TIMER: Lights when a schedule is set, and blinks while the schedule recording is being performed.

OPERATE: Lights when the power is on.

② **Alarm reset button [ALARM RESET]**

Press this button to reset the alarm.

③ **Camera selection buttons**

Press the desired camera selection button to display images from the respective camera. The camera selection buttons indicates the status of the respective cameras as follows.

Lights green: Indicates the camera channel from which images are currently being displayed on a monitor

Blinks orange: Indicates the camera channel of which images are currently being recorded

④ **Recording/Playback operation button**

[■ STOP] button: Press this button to stop playback.

[▶ PLAY ❚❚ PAUSE] button: Press this button to start playback. Playback will be paused by pressing this button during playback. (During playback: Lights green, During pausing: Blinks green)

[● REC] button: Starts manual recording. Recording will stop by holding down this button for 2 seconds or more during the manual recording. (During recording: Lights orange)

⑤ **Jog dial (inside)/Shuttle ring (outside)**

Jog dial: The following functions are provided.

- Frame by frame playback can be performed during pausing.
- Skip can be performed during playback.

Shuttle ring: The following functions are provided.

- Fast forward/reverse playback can be performed during playback.

⑥ **Hold button [HOLD]**

Press this button during fast forward/reverse playback started by the shuttle ring to hold the current playback speed (hold playback speed function). (During hold playback: Blinks green)

This button can also be used for the panning/tilting operation of the camera. (During low-speed panning/tilting control: Lights green)

⑦ **Maintenance port [MAINTENANCE]**

The maintenance port that can be used for connection with a PC is provided inside the cover. Do not use for any operation other than maintenance.

⑧ **HDD indicators (HDD1 - HDD4)**

STS (status): Indicates the operational statuses of the respective hard disk drive.

Lights green: Indicates that the power of the respective hard disk drive (formatted) is on.

Blinks green: Indicates that the respective hard disk drive is for playback use only. (Recording is unavailable using the respective hard disk drive.)

Blinks orange: Indicates that the respective hard disk drive is currently being formatted.

Lights red: Indicates that formatting of the respective hard disk drive has failed.

Off: Indicates that the power of the respective hard disk drive is off, or that the hard disk drive is not connected/recognized.

A/F (HDD access/failure): Indicates the status (access/failure) of the respective hard disk drive.

Blinks green: Indicates that the respective hard disk drive is being accessed.

Lights red: The respective built-in hard disk drive is faulty (Data recovery is possible by replacement.)

Blinks red: The respective built-in hard disk drive is faulty (Data recovery is possible by replacement.)

Lights red and orange alternately: Indicates that the respective hard disk drive is currently being recovered in the RAID 5/RAID 6 mode. (It may appear that the indicator lights orange when recovery is being processed at high speed.)

Off: Indicates that the respective hard disk drive is not being accessed.

Important:

- When operating in the RAID5/RAID6 mode and the HDD indicator lights red, replace the faulty hard disk drive promptly. Contact your dealer for replacement of hard disk drives.
  In the RAID 5 mode:
  When 2 or more HDD indicators light/blink red, it is impossible to recover data on the faulty hard disk.
  In the RAID 6 mode:
  When 3 or more HDD indicators light/blink red, it is impossible to recover data on the faulty hard disk.

---

⑨ **Monitor operation buttons**

[MONITOR] button: Press this button to change the monitor to be operated. The monitor number will light to indicate the monitor currently being selected.

[SEQ] button: Press this button to start/stop the sequence. (During the sequence: Lights green)

[OSD] button: Press this button to display/hide information such as the camera title.

[MULTI SCREEN] button: Press this button to change the display pattern of multi-screen. (The display pattern of multi-screen will change each time this button is pressed.)

⑩ **Playback control function button**

[GOTO LAST] button: Press this button to jump the playback point to the top of the latest recorded image.

[GOTO DATE] button: Press this button to designate time and date of recorded images to be played.

[SEARCH] button: Press this button to play recorded images after the recording event search or the VMD search. (During search and playback: Lights green)

[COPY] button: Press this button to display the menu on which it is possible to copy data onto a DVD or an SDHC/SD memory card. (☞ Page 59)

⑪ **[SUB MENU] button**

Press this button to display the submenu used for camera operation and the electronic zoom. (☞ Page 16)

⑫ **Menu operation button**

Arrows button: Use this button to move the cursor on the setup menu, the search menu, etc.

[SETUP/ESC] button: Hold down this button for 2 seconds or more to display the setup menu. When the setup menu is being displayed, press this button to go back to the previous page.

[SET] button: Press this button to determine the edited settings on the setup menu.
This button also can be used to turn the alarm suspension on/off. (☞ Page 58)

⑬ **Mouse port [MOUSE]**

Use this port to connect a USB mouse (commercially available). (No device other than a mouse can be connected.)

* It is impossible to connect a mouse to the mouse connection port if the connector from the mouse is upside down. When it is hard to connect, check the upside down position of the connector from the mouse.

⑭ **SDHC/SD memory card slot/External output connector (AUDIO OUT, VIDEO OUT)**

The video output connector to be used for output to a VCR, audio output connector (RCA pin jack) and SDHC/SD memory card slot are provided inside the cover.

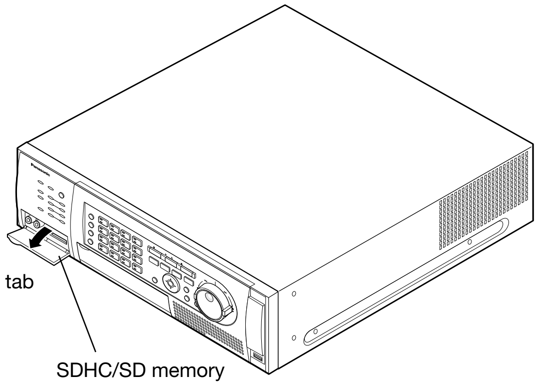
⑮ **Built-in DVD**

It is possible to install an optional built-in DVD (WJ-HDB611).

Insert an optional SDHC/SD memory card

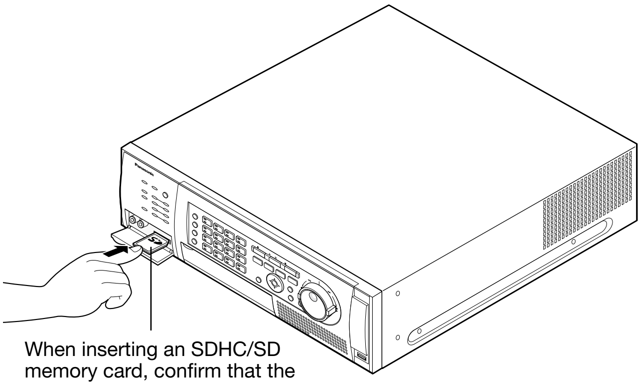
Step 1

Open the SDHC/SD memory card slot.



Step 2

Insert an SDHC/SD memory card to the slot until it clicks.



When inserting an SDHC/SD memory card, confirm that the label on the SDHC/SD memory card is upside and only the upper right corner of the card has different shape.

Step 3

Close the cover of the SDHC/SD memory card slot.

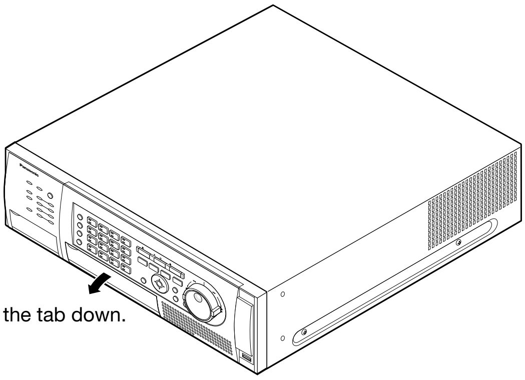
Note:

- When removing the SDHC/SD memory card from the slot, push the card until it clicks and pull it up straight.

Insert a DVD disc (commercially available)

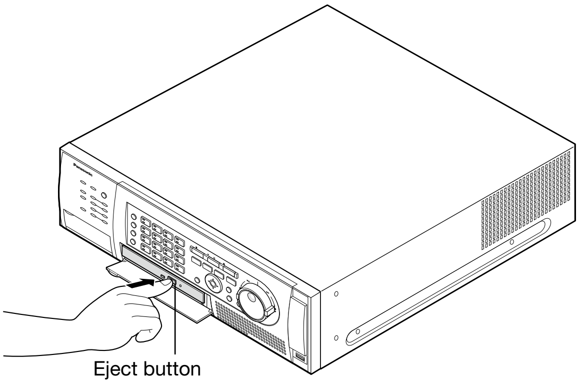
Step 1

Open the DVD drive cover.



Step 2

After confirming that the power of the recorder is on, press the eject button located at the center of the DVD drive and pull the disc tray gently.

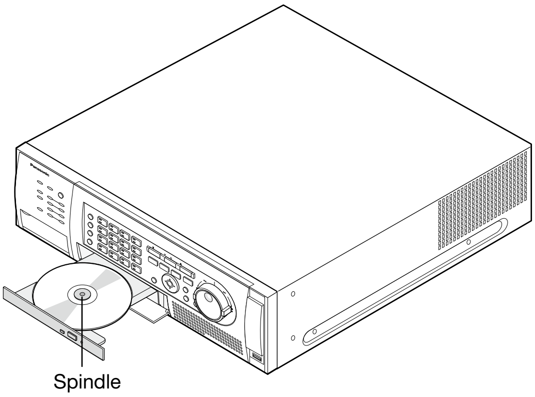


Note:

- After copying the recorded data on a DVD, perform the procedure to eject the DVD. (☞ Page 61) Otherwise, the tray may not open even after the eject button is pressed.

Step 3

Place a disc with the label side up and fit the hole of the disc to the center (spindle) of the tray. Then, push the tray gently. Click sound will be heard and the inserted disk will be set.



Step 4

Push the tray to the end. Click sound will be heard and the tray will be fixed.

Step 5

Close the DVD drive cover.

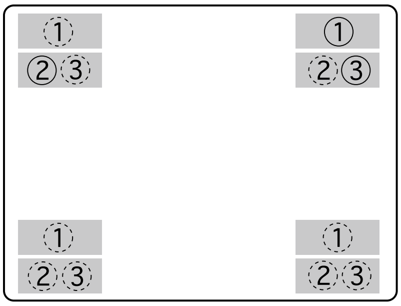
Important:

- When opening/closing the DVD drive tray, do not apply force on the tray.
- When not using the DVD drive, close the disc tray.
- When removing the disc from the tray, press the spindle to detach the disc. If trying to detach the disc forcibly, it can damage both the disc and the DVD drive.

About the operation window

Monitor 1

(Monitor to display live images only)



The default positions are indicated by the circled numbers. (Broken lined circles are not the default positions.)

Important:
- The setup menu will not be displayed on monitor 1.

---

① **Camera title**
The set camera title will be displayed. The camera title display position can be selected from "Upper left", "Lower left", "Upper right" and "Lower right". At the default, the camera title will be displayed at upper right (R-Upper).

Note:
- The camera title will be displayed with up to 14 characters.

---

② **Time and date display**
The current time (hour, minute, second) and date (year, month, day) will be displayed.
The time and date display position can be selected from "Upper left", "Lower left", "Upper right" and "Lower right".
At the default, the time and date will be displayed at upper left (L-Upper).

Note:
- When the display position of the camera title and the time and date are set at the same position, the time and date will be displayed at the selected position.
- When selecting monitor 1, it is possible to display/ hide the camera title and the time and date by pressing the [OSD] button.

---

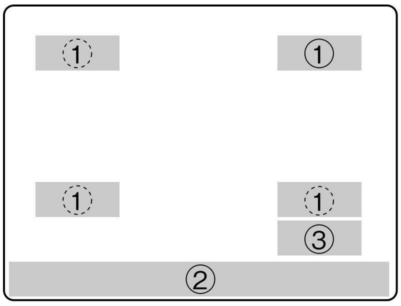
③ **Event display**
The event display will be display at the opposite side of the time and date display.
When the time and date is displayed at the lower left, the event display will be at the lower right. At the default, the event occurrence will be displayed at upper right (R-UPPER).
The event occurrence will be displayed as follows.
"*" indicates the camera channel (1 - 16).
"#" indicates the alarm number.

VMD-*: Displayed when a motion is detected
LOSS-*: Displayed when a video loss occurred
COM-#: Displayed when a command alarm occurred
TRM-#: Displayed when a terminal alarm occurred
EMR: Displayed during the emergency recording
SITE-*: Displayed when a camera site alarm occurred
CMTN-*: Displayed when a motion is detected (SD5Link camera)
CRMV-*: When an object appears/disappears (SD5Link camera)
CSTY-*: Displayed when a staying object is detected (SD5Link camera)
CDRT-*: Displayed when a object moving to the specified direction is detected (SD5Link camera)
CTRM-*: Displayed when a camera terminal alarm occurred (SD5Link camera)
CSCD-*: Displayed when an interference with the camera is detected (SD5Link camera)

Note:
- Refer to page 56 for further information about each event and their event actions.

Monitor 2

(Monitor to display live images, recorded images and the setup menu)



The default positions are indicated by the circled numbers. (Broken lined circles are not the default positions.)

① **Camera title**

The set camera title will be displayed. The camera title display position can be selected from "Upper left", "Lower left", "Upper right" and "Lower right". At the default, the camera title will be displayed at upper right (R-Upper).

② **Status bar**

The current status will be displayed.

The display position can be selected from "Upper" and "Lower".

The default display position is "Lower".

Note:

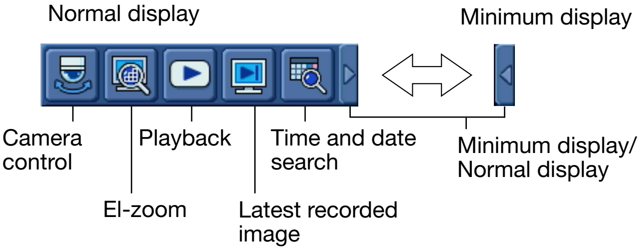
- The camera title will be displayed with up to 14 characters.
- When selecting monitor 2, it is possible to display/hide the camera title display and the status bar respectively by pressing the [OSD] button.
- Images recorded with the "Time embed" setting "On" will be played in the embedded recording mode.
  EVT: Pre-event recording/Post-event recording
  EMR: Emergency recording

---

③ **Shortcut launcher**

It is possible to execute a function such as playback by simply pressing each button on the shortcut launcher.

The shortcut launcher will be displayed only when a mouse (commercially available) is connected.



Minimum display/Normal display: When the triangle is clicked, display of the shortcut launcher will be switched between the normal display and the minimum display.

Time and date search: When this button is clicked, the "Go to date" window will be displayed. (☞ Page 43)

Latest recorded image: When this button is clicked, playback of the latest recorded images will start and the "REC & Playback" panel will be displayed. (☞ Page 44)

Playback: When this button is clicked, playback will start and the "REC & Playback" panel will be displayed. (☞ Page 39)

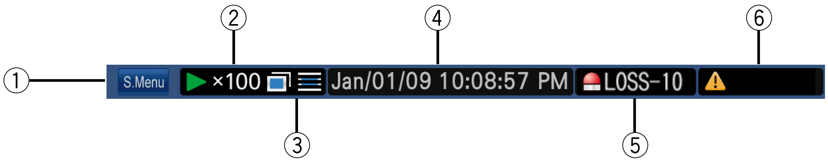
El-zoom: When this button is clicked, the displayed images will be displayed at x2 and the "El-zoom" panel will be displayed. This button will work only when images are being displayed on a 1-screen. (☞ Page 31)

Camera control: When this button is clicked, the camera control panel will be displayed. (☞ Page 64)

Note:

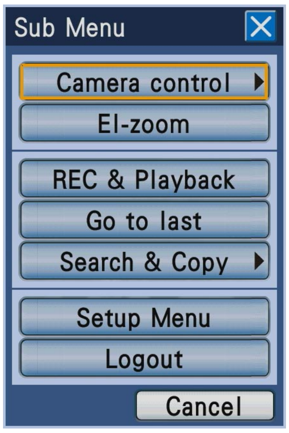
- The shortcut launcher will be displayed (or hidden) when the status bar is displayed (or hidden). When the status bar is displayed at the bottom of the screen (Lower), the shortcut launcher will be displayed at the lower right corner. When the status bar is displayed at the top of the screen (Upper), the shortcut launcher will be displayed at the upper right corner.
- When a panel such as the operation panel is displayed, the shortcut launcher will be hidden.

Description of the status bar



① Submenu button [S.Menu]

The submenu window will be displayed.



In the submenu window, the following menu buttons are provided.

Camera control

The camera control panel and the camera menu panel will be displayed. It is possible to control a camera, such as panning/tilting, preset position movement, on the camera control panel. On the camera menu panel, it is possible to operate the camera setup menu.

El-zoom

The electronic zoom panel will be displayed. It is possible to enlarge images from the camera and to move the angular field of view using the electronic zoom.

REC & Playback

The recording/playback panel will be displayed. It is possible to perform operations relating to recording and playback.

* The recording/playback panel cannot be operated using the buttons on the front panel of the recorder.

Go to last

The latest recorded image will be played. Playback will start from the point set in advance of the latest recorded image. Refer to the Installation Guide for further information about the point of the latest recorded image.

Search & Copy

It is possible to perform operations relating to search and playback and relating to copying of data (onto a DVD or an SDHC/SD memory card), etc. The search conditions panel or the data copy panel will be displayed. It is also possible to cancel the search filters and to validate the DVD eject button from this menu.

Setup Menu

The setup menu will be displayed. Refer to the Installation Guide for further information about the setup menu.

Logout

It is possible to log out from the recorder from this menu.

② Status display area

Indication	Description	Indication	
Live	Indicates that live images are currently being displayed. The sequence display function is the function that can automatically switch and display images from multiple cameras sequentially.	■ (No indication)	: Currently live images are being displayed
		SEQ	: Currently live images are being displayed in sequence
Playback	Indicates that recorded images are currently being played. When playback is being performed not at normal speed, the playback speed also will be displayed. When the playback speed is being held, the playback speed will be displayed in orange.	▶	: Currently recorded images are being played
		◀	: Currently recorded images are being played reversely
		❚❚	: Currently playback is paused
		▶▶×100	: Currently recorded images are being played at a specified playback speed
		◀◀×100	: Currently recorded images are being played reversely at a specified playback speed

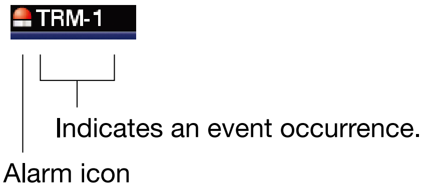
③ Copy/Delete icon, source disk selection, mirror/RAID recovery display area

Indication	Description	Indication	
Copy	Indicates that copying is currently being performed.	❐	: Currently data is being copied
Delete	Indicates that data is currently being deleted	▤	: Currently data is being deleted
RECOVER	Indicates that RAID recovery is currently being performed	RECOVER	: Currently RAID recovery is being performed
DVD selection	Indicates that an optional DVD drive (WJ-HDB611) is currently being selected	DVD	: Currently the DVD drive is being selected
SDHC/SD memory card selection	Indicates that an SDHC/SD memory card is currently being selected	SD	: Currently the SDHC/SD memory card (optional) is being selected

④ Live/Playback time and date display area

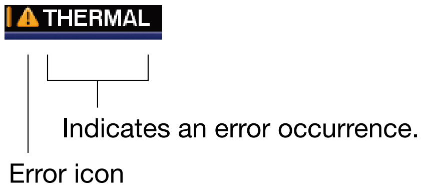
Indication	Description	Indication
Time	Time and date of the displayed images will be displayed. When live images are being displayed: The current time and date will be displayed. When recorded images are being played: The time and date when the images were recorded will be displayed. The asterisk "*" will be displayed before time and date during the summertime.	05. 8.25 12:34:56 Year, month, day / Hour, minute, second

⑤ Alarm display area

Indication	Description	Indication
Alarm	Indicates that an alarm occurred. "*" indicates the camera channel (1 - 16). "#" indicates the alarm number. VMD-*: Displayed when a motion is detected LOSS-*: Displayed when a video loss occurred COM-#: Displayed when a command alarm occurred TRM-#: Displayed when a terminal alarm occurred SITE-*: Displayed when a camera site alarm occurred CMTN-*: Displayed when a motion is detected (SD5Link camera) CRMV-*: When an object appears/disappears (SD5Link camera) CSTY-*: Displayed when a staying object is detected (SD5Link camera) CDRT-*: Displayed when a object moving to the specified direction is detected (SD5Link camera) CTRM-*: Displayed when a camera terminal alarm occurred (SD5Link camera) CSCD-*: Displayed when an interference with the camera is detected (SD5Link camera) EMR: Displayed when an emergency recording started	

Note:
- Refer to page 56 for further information about each event and their event actions.

⑥ Error display area

Indication	Description	Indication
Error	Indicates that an error occurred. ALT-*: Alteration is detected SMART: HDD early warning (predictable failure) H-METER: Reached the set time for the hour meter warning When the HDD operation time reached the set time THERMAL: Thermal error occurred POWER: Power outage is detected ※-**%: Remaining capacity warning ※-FULL: No disk space CPY-ERR: Copy error (Destination) REMOVE: When the HDD on which an access error occurred was automatically removed	

Partitions indicated by "※"

Partition	Indication
Normal recording area	NML
Event recording area	EVT

Indication	Description	Indication
Error	1DOWN: A single hard disk drive in RAID (RAID 5/RAID 6) is faulty (which can be recovered by replacing the hard disk drive) 2DOWN: 2 hard disk drives in RAID (RAID 5/ RAID 6) are faulty (which can be recovered by replacing the hard disk drives when operating in the RAID 6 mode) 3DOWN: 3 hard disk drives in the RAID 6 mode are faulty (which cannot be recovered by replacing the hard disk drives) FAN: Cooling fan error occurred SWAR-ERR: A hard disk drive was removed without pressing the [USE] button during the recording is running R-FAIL: RAID recovery failed (RAID 5/RAID 6) F-FAIL: Failed to format the hard disk drive "*" indicates the camera channel (1 - 16). "※" indicates the partition (See the descriptions.) "**" indicates a number (%) of the remaining disk	

Note:
- Refer to the Installation Guide for further information about each error.

Basic operation

To directly operate the recorder, there are 2 ways of how to operate it: operations using the buttons on the front panel and operations using a mouse connected to the recorder.
The following are descriptions of how to perform the basic operation in these 2 ways.

Important:

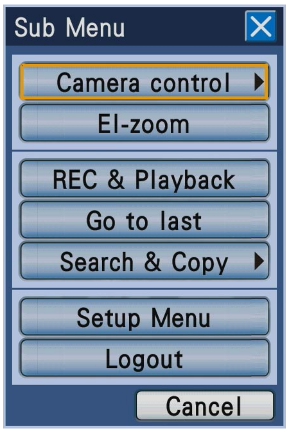
- The instructions in this manual are mainly using the buttons on the front panel. Instructions for both are provided for operations only when different procedures are to be made depending on whether using the buttons on the front panel or the mouse.
  When preferring to use the mouse, operate the recorder using the mouse by referring the instructions of how to operate the recorder using the buttons on the front panel after understanding how to operate the recorder using the mouse by referring the instructions in the "Operate using the mouse" chapter.

Operations using the buttons on the front panel

The recorder can be operated using the buttons on the front panel to which the functions are assigned.
Refer to the "Major operating controls and their functions" section (☞ page 9) for further information about the functions assigned to each button.

Operations of the submenu

The submenu will be displayed by pressing the [SUB MENU] button on the front panel.



Refer to page 16 for further information about the functions operable on the submenu and the descriptions about them.
The following are instructions for how to operate the submenu window and a panel displayed by selecting a submenu (camera control panel, camera menu panel, El-zoom panel, REC & playback panel).

Menu selection
Move the cursor using the arrows button (▼ ▲ ◄ ►), and then press the [SET] button. The panel of the selected menu will be displayed.

Close the submenu window
Press the [SETUP/ESC] button. It is also possible to close the submenu window by pressing the [SET] button after moving the cursor onto the [Cancel] button.

Tab selection on a panel
When a number (1 - 4) is provided for the tab name, press the camera selection button (1 - 4) to select the tab.
When no number is provided for the tab name, press the [SET] button after moving the cursor using the arrows button (▼ ▲ ◄ ►).

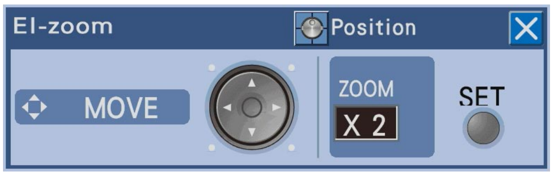
Move the position of a panel

It is possible to move a panel to the other corner of the screen by rotating the jog dial (inside). When rotating the jog dial (inside) clockwise, the panel will move to the next corner in order clockwise. When rotating the jog dial counterclockwise, it will move counterclockwise.

Operations on panels

Panels can be operated by pressing buttons on the front panel including the arrows button (▼, ▲, ◄, ►).

Example: When operating the El-zoom panel



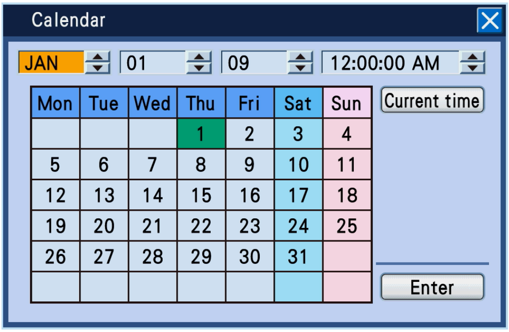
- Enlarge images from the camera using the electronic zoom
  Each time the [SET] button is pressed, the zoom factor will change between x2, x4 and x1.
- Move the display area of images from cameras
  When the zoom factor is x2 or x4, it is possible to move the image display area by pressing the arrows button (▼, ▲, ◄, ►).

Close the panel

Press the [SETUP/ESC] button.

Operations of the software keyboard for time and date entry

When it is necessary to designate time and date such as when searching for a recording event, use the software keyboard for time and date entry that can be displayed by pressing the [SET] button after moving the cursor onto the time and date entry field.



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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Note:

- When the [SET] button is pressed after moving the cursor onto the [Current time] button, the current time and date will be entered.

The software keyboard for time and date entry can be operated as follows.

Step 1

Move the cursor onto each entry field (year, month, day, time) using the arrows button (▼, ▲, ◄, ►), and select values for them using the jog dial (inside).

→ When the time and date are set, the date mark on the calendar will move to the appropriate position.

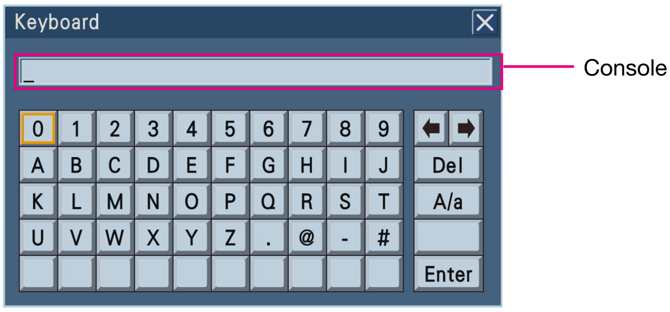
Step 2

Move the cursor onto the [Enter] button using the arrows button (▼ ▲ ◄ ►), and then press the [SET] button.

→ The set time and date will be applied and the software keyboard for time and date entry will close.

Operations of the software keyboard for character entry

When it is necessary to enter characters such as when setting the camera titles on the setup menu, use the software keyboard for character entry that can be displayed by pressing the [SET] button after moving the cursor onto the entry field.



Functions of each button on the right of the software keyboard are as follows.

[← →] button
Moves the cursor to the right and left in the console on the upper side of the keyboard.

[Del] button
Deletes a character on the cursor in the console.

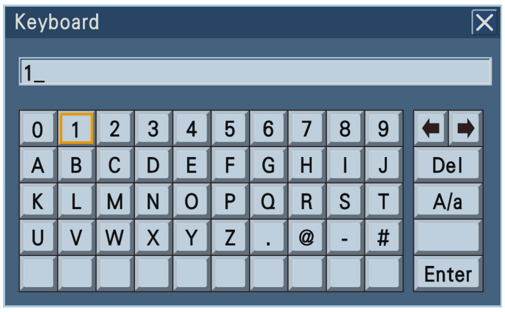
[A/a] button
Changes the letter entry mode of the keyboard between the capital letter entry, the lower-case letter entry and the mark entry.

The software keyboard for character entry can be operated as follows.
Up to 255 characters can be entered.

Step 1

Move the cursor onto a desired character using the arrows button (▼ ▲ ◄ ►), and then press the [SET] button.

→ The selected character will be displayed in the console and the cursor will move to the right.



Step 2

Repeat step 1 to continue entering characters.

Step 3

Move the cursor onto the [Enter] button using the arrows button (▼ ▲ ◄ ►) when the character entry is complete, and then press the [SET] button.

→ The entered characters will be applied and the software keyboard for character entry will close.

Note:

- It is possible to delete a character on the cursor in the console by pressing the [STOP] button on the front panel.
- It is also possible to delete all characters in the console by holding down the [STOP] button for 2 seconds or more.

Operations using a mouse

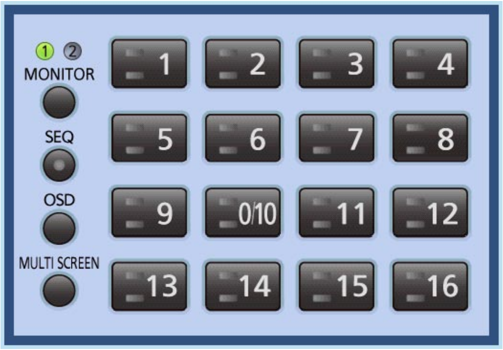
The recorder can be operated using a mouse connected to the mouse port (☞ page 11) on the front panel. Move the mouse cursor onto a button or a tab on the screen, and then click on it.

Note:

- When no operation is made for 10 seconds or more, the mouse cursor will be hidden. The mouse cursor will be displayed when the mouse is moved.
- It is impossible to connect a mouse to the mouse connection port if the connector from the mouse is upside down. When it is hard to connect, check the upside down position of the connector from the mouse.

Operations of the operation panel

When right-clicking, the operation panel representing the front panel (the monitor operation button and the camera selection button on the front panel) will be displayed.



Operations on panels

The following operations can be made by clicking each button.
Refer to the respective pages for further information about each function.

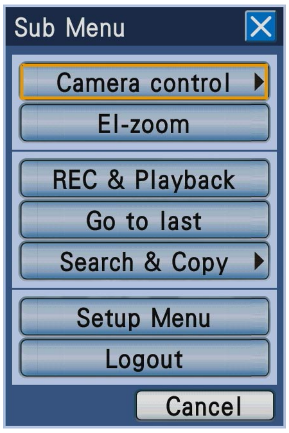
- Change camera channels (☞ page 30)
- Select the monitor (monitor 1/monitor 2) to operate (☞ page 29)
- Start/stop the sequence ((☞ page 34)
- Display/hide the camera title and the status bar (☞ page 30)
- Change the screen pattern of the multiscreen (☞ page 32)

Close the panel

Click anywhere outside the operation panel.

Operations of the submenu

The submenu will be displayed by clicking the [S.Menu] button (☞ page 16) on the status bar.



The submenu window is the same window that can be displayed when operating the buttons on the front panel. Refer to page 16 for further information about the functions operable on the submenu and the descriptions about them.
The following are instructions for how to operate the submenu window and a panel displayed by selecting a submenu (camera control panel, camera menu panel, El-zoom panel, REC & playback control panel).

Menu selection
Click any of the menu buttons. The panel of the selected menu will be displayed.

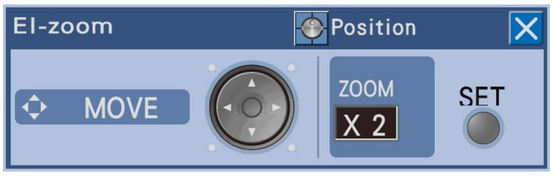
Close the submenu window.
Click the [x] button or the [Cancel] button.

Tab selection on a panel
Click a desired tab.

Move the position of a panel
Click the [Position] button. Each time the [Position] button is clicked, the panel will move to the next corner clockwise.

Operations on panels
Panels can be operated by clicking buttons on the panel including the arrows button (▼, ▲, ◄, ►).

Example: When operating the El-zoom panel

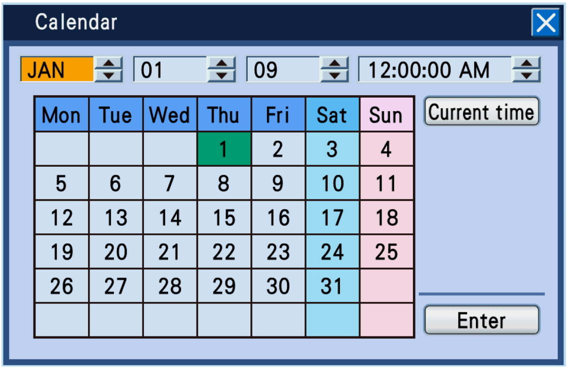


- Enlarge images from the camera using the electronic zoom
  Each time the [SET] button is clicked, the zoom factor will change between x2, x4 and x1.
- Move the display area of images from cameras
  When the zoom factor is x2 or x4, it is possible to move the image display area by clicking the arrows button (▼, ▲, ◄, ►).

Close the panel
Click the [x] button.

Operations of the software keyboard for time and date entry

When it is necessary to designate time and date such as when searching for images recorded at the specified time and date, use the software keyboard for time and date entry that can be displayed by clicking the icon on the right of the console.



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Mon	Tue	Wed	Thu	Fri	Sat	Sun
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5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Note:

- When the [Current time] button is clicked, the current time and date will be entered.
- It is possible to move the time and date forward/ backward faster by holding down the [▲] or [▼] button.

The software keyboard for time and date entry can be operated as follows.

Step 1

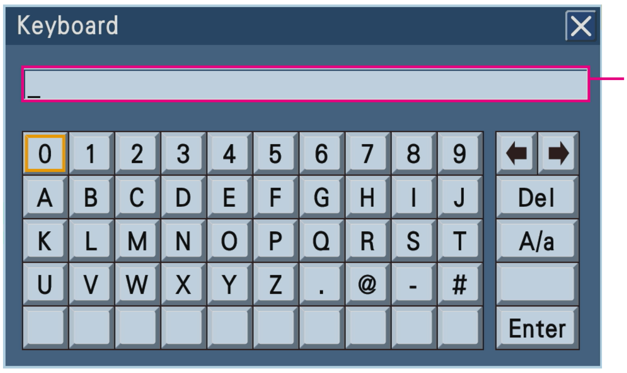
Set time and date (year, month, day, time) by clicking [▼] and [▲] provided for each of them.
It is also possible to set time and date by clicking the calendar.

Step 2

Click the [Enter] button.
→ The set time and date will be applied and the software keyboard for time and date entry will close.

Operations of the software keyboard for character entry

When it is necessary to enter characters such as when setting the camera titles on the setup menu, use the software keyboard for character entry that can be displayed by clicking the icon on the right of the console.



Console

Functions of each button on the right of the software keyboard are as follows.

[← →] button
Moves the cursor to the right and left in the console on the upper side of the keyboard.

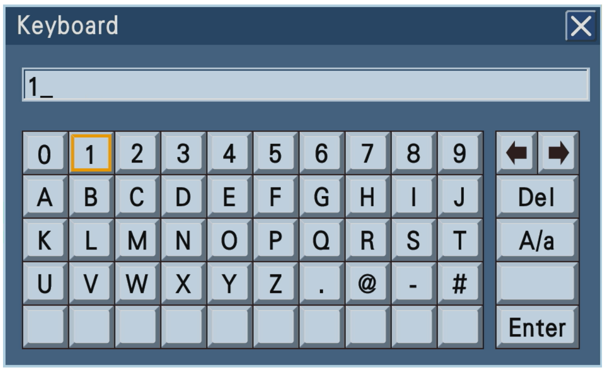
[Del] button
Deletes a character on the cursor in the console.

[A/a] button
Changes the letter entry mode of the keyboard between the capital letter entry, the lower-case letter entry and the mark entry.

The software keyboard for character entry can be operated as follows.
Up to 255 characters can be entered.

Step 1

Select a desired character by clicking it.
→ The selected character will be displayed in the console and the cursor will move to the right.


Keyboard
1_
0 1 2 3 4 5 6 7 8 9
A B C D E F G H I J
K L M N O P Q R S T
U V W X Y Z . @ - #
Del
A/a
Enter

Step 2

Repeat step 1 to continue entering characters.

Step 3

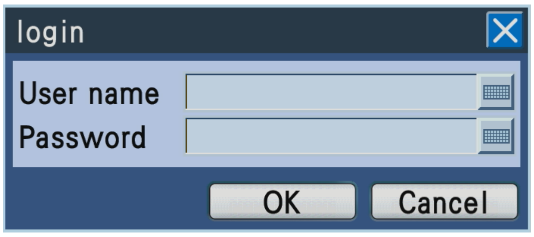
Click the [Enter] button when the character entry is complete.
→ The entered characters will be applied and the software keyboard for character entry will close.

Login operation at startup

When "Off" is selected for "Auto login", the login window will be displayed by pressing any button on the front panel after completing the system check.
Enter a user name and password as follows when the login window is displayed.

Step 1

Enter a user name and password. When the [SET] button is pressed after moving the cursor to the entry field, the software keyboard for character entry will be displayed.



- Refer to pages 22 and 25 for how to operate the software keyboard for character entry.
- Refer to the Installation Guide for how to register users.

Note:
- When "On" is selected for "Quick login", the user name can be selected from the displayed list. (☞ Installation Guide)

Step 2

Move the cursor onto the [OK] button using the arrows button (▼ ▲ ◄ ►), and then press the [SET] button.

→ When the entered user name and password are correct, the login window will disappear and live images will be displayed. When the entered user name or password is incorrect, the login window will be displayed again.

Note:
- The default administrator name and password are as follows.
  Administrator name: ADMIN
  Password: 12345
- To enhance the security, change the default administrator name and password before running the recorder. Change the password periodically. Refer to the Installation Guide for how to change the password.
- To log out, select "Logout" from the submenu. Refer to page 16 for further information about the submenu.

Monitor live images from cameras

When the recorder started up, live images from cameras will be displayed according to the configured settings. Live images from cameras are displayed via the recorder.

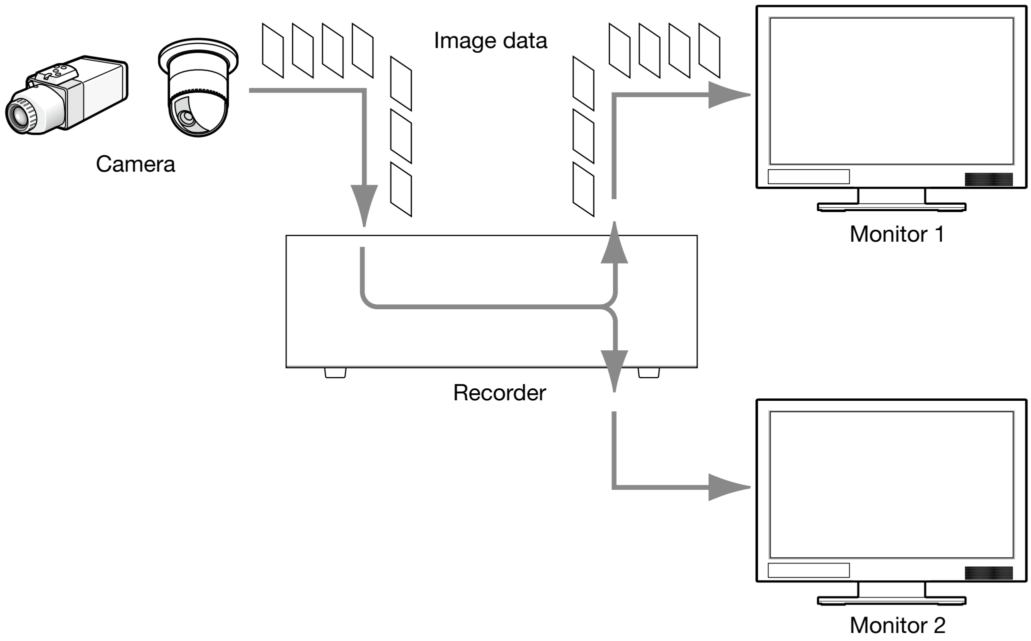


Image data
Camera
Monitor 1
Recorder
Monitor 2

It is possible to display live images on a 1-screen or on a multiscreen. It is also possible to display live images from multiple cameras sequentially by switching the camera channels in order (sequence display).

Select a monitor (monitor 1/monitor 2)

Live images can be displayed on both monitor 1 and monitor 2. When switching between a 1-screen and a multiscreen or when changing the camera channels for live images, it is firstly necessary to select a monitor (monitor 1 or monitor 2) to operate.

Operation using the buttons on the front panel

Step 1

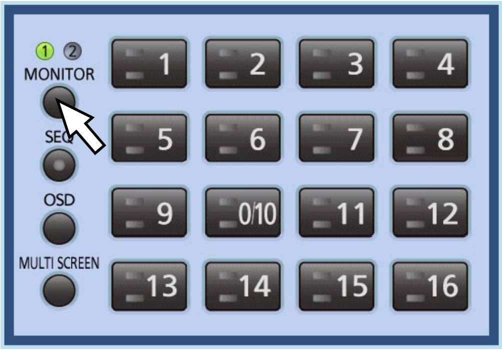
Press the [MONITOR] button.
Each time the [MONITOR] button is pressed, the monitor selection will change.

→ The monitor number will light to indicate the monitor currently being selected.

Operations using a mouse

Step 1

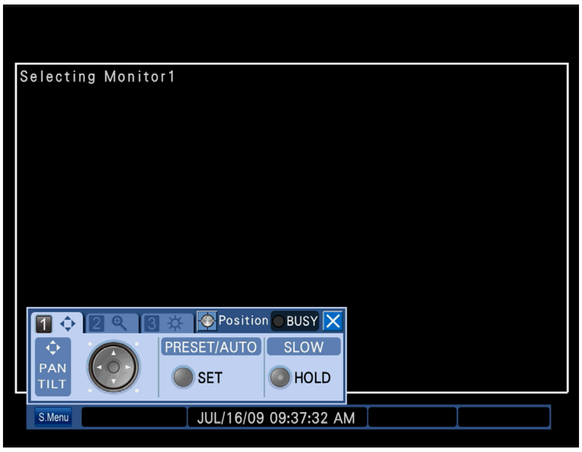
Display the operation panel by right-click, and then press the [MONITOR] button.



→ The monitor number will light to indicate the monitor currently being selected.

Note:

- When displaying the operation panel or the other panel (camera control panel, camera menu panel, El-zoom panel) during monitor 1 is being selected, the indication "Monitor 1 selected" will be displayed on monitor 2. During the indication "Monitor 1 selected" is being displayed, monitor 1 can be operated using the operation panel displayed on monitor 2.
- The operation panel will not be displayed on monitor 1.



Selecting Monitor1

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Display images on a 1-screen

To display live images on a 1-screen, take the following procedures.

Operation using the buttons on the front panel

Step 1

Select a monitor to display images. (☞ Page 29)

Step 2

Select a camera channel from which images are to be displayed on the selected monitor by pressing the camera selection button (1 - 16).

→ The selected camera selection button will light and live images will be displayed on the selected monitor.

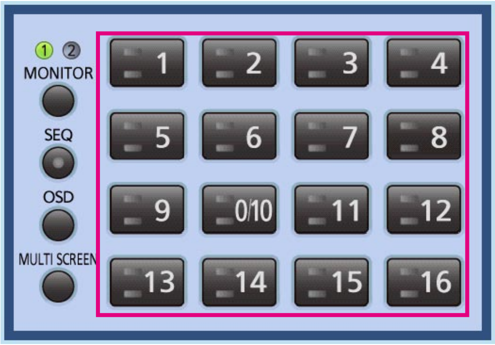
Operations using a mouse

Step 1

Select a monitor to display images. (☞ Page 29)

Step 2

Display the operation panel by right-click, and then select a camera channel by clicking the camera selection button (1 - 16).



→ The selected camera selection button will light and live images will be displayed on the selected monitor.

Display/Hide the camera title and the status bar

It is possible to display/hide the camera title and the status bar displayed on the monitor.

Operation using the buttons on the front panel

Step 1

Press the [OSD] button.

→ Action (display/hide) of the camera title and the status bar will be taken differently according to the monitor (monitor 1/monitor 2).

When monitor 1 is being selected

The camera title and the time display will be displayed/hidden by pressing the [OSD] button.

Operations using a mouse

Step 1

Display the operation panel by right-click, and then click the [OSD] button.

→ Action (display/hide) of the camera title and the status bar will be taken differently according to the monitor (monitor 1/monitor 2).

When monitor 1 is being selected

The camera title and the time display will be displayed/hidden by clicking the [OSD] button.

When monitor 2 is being selected
Each time the [OSD] button is pressed, display of the camera title and the status bar will change as follows.
Display the camera title and hide the status bar →
Hide the camera title and display the status bar →
Hide both the camera title and the status bar →
Display both the camera title and the status bar

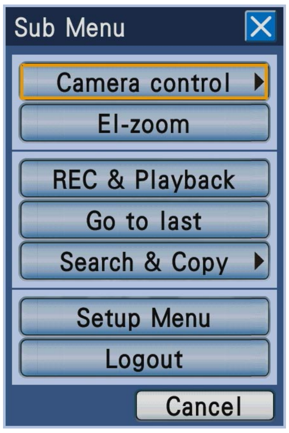
When monitor 2 is being selected
Each time the [OSD] button is clicked, display of the camera title and the status bar will change as follows.
Display the camera title and hide the status bar →
Hide the camera title and display the status bar →
Hide both the camera title and the status bar →
Display both the camera title and the status bar

Use the electronic zoom

When displaying images on a 1-screen, it is possible to enlarge the displayed live images using the electronic zoom. It is also possible to move the area of the enlarged image to be displayed.

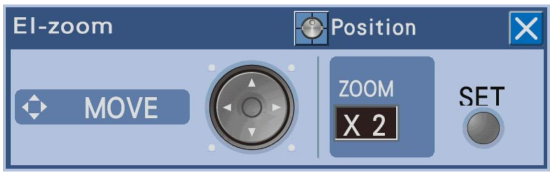
Step 1

Press the [SUB MENU] button.
→ The submenu window will be displayed.



Step 2

Move the cursor onto [El-zoom], and then press the [SET] button.
→ Images will be displayed at x2 and the El-zoom panel will be displayed.



Step 3

When the [SET] button is pressed, images will be displayed at x4.
Each time the [SET] button is pressed, the zoom factor will change as follows.
x4 → x1 → x2

Note:

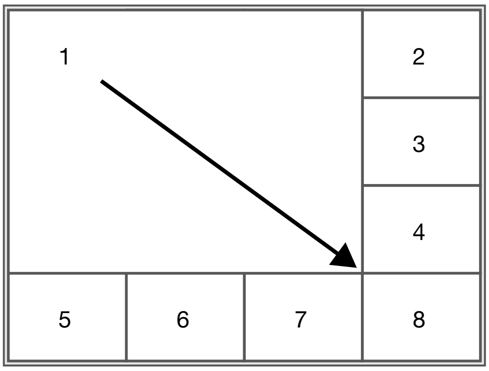
- When the zoom factor is x2 or x4, it is possible to move the area of the enlarged image to be displayed by pressing the arrows button (▼, ▲, ◄, ►).

Display images on a multiscreen

To display live images on a multiscreen (4-, 7-, 8-, 9-, 12-, 16-screen), take the following procedures.
Images will be displayed on a multiscreen with the screen pattern selected on the setup menu ("Camera setup" under "Multi screen setup" on the "Common" tab under "Display" (☞ Installation Guide)).

Note:

- Black zones will be displayed on the right and left or on the top and bottom depending on the connected monitor.
- The multiscreen pattern will change as follows.
  16-screen → 4-screen → 7-screen → 8-screen → 9-screen → 12-screen → 16-screen
- When audio is being input, audio assigned to the camera from which images are displayed on the segment at upper left corner will be heard. When no audio is assigned to the camera (from which images are displayed on the segment at upper left corner), audio to be output will be determined in order of priority. The order of priority is as follows.
  Upper left (highest priority) → Lower right (Lowest priority)
  Example: When displaying images on an 8-screen, the order of priority will be as follows.



When no audio is assigned to any of the camera channels from which images are currently being displayed on a multiscreen, audio being input to audio input connector 1 (AUDIO IN 1) will be heard.

Operation using the buttons on the front panel

Step 1

Select a monitor to display images.
(☞ Page 29)

Step 2

Press the [MULTI SCREEN] button.

→ Each time the button is pressed, the screen pattern of the multiscreen will change.

Step 3

To display images on a 1-screen, press any of the camera selection button (1 - 16).

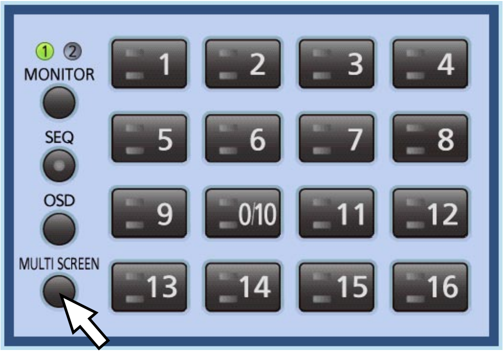
Operations using a mouse

Step 1

Select a monitor to display images.
(☞ Page 29)

Step 2

Display the operation panel by right-click, and then click the [MULTI SCREEN] button.



→ Each time the button is clicked, the screen pattern of the multiscreen will change.

Step 3

To display images on a 1-screen, do either of the following.

- Click the camera selection button (1 - 16).
- Click a segment (on the multiscreen) to be displayed on a 1-screen.
  (When the screen is clicked again, the multiscreen will be displayed again.)

Display images from multiple cameras sequentially (sequence display)

The sequence display function is the function that can automatically switch and display images from multiple cameras sequentially.
The sequence display will be performed according to the settings configured in advance.
The setting for the sequence display can be configured on "Live sequence" on the "Monitor 1" tab (or "Monitor 2" tab) under "Display" of the setup menu. (☞ Installation Guide)

Operation using the buttons on the front panel

Step 1

Select a monitor to display images.
(☞ Page 29)

Step 2

Press the [SEQ] button.
→ The sequence display will be performed according to the configured settings.
The [SEQ] button will light during the sequence display.

Step 3

To stop the sequence display, press the [SEQ] button again.
To resume the sequence display, press the [SEQ] button.
When the sequence display is resumed, the sequence display will be performed from step 1 again.

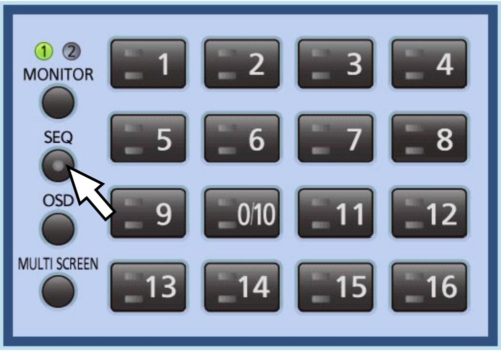
Operations using a mouse

Step 1

Select a monitor to display images.
(☞ Page 29)

Step 2

Display the operation panel by right-click, and then press the [SEQ] button.



→ The sequence display will be performed according to the configured settings.
The [SEQ] button will light during the sequence display.

Step 3

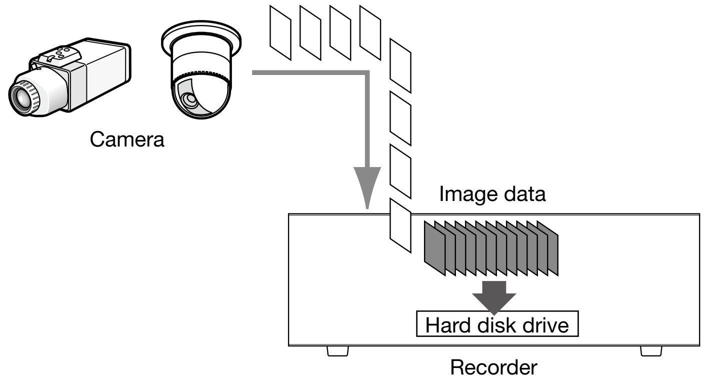
To stop the sequence display, click the [SEQ] button again.
To resume the sequence display, click the [SEQ] button. When the sequence display is resumed, the sequence display will be performed from step 1 again.

Note:

- The sequence display on monitor 1 will be paused until the setup menu is displayed on monitor 2.

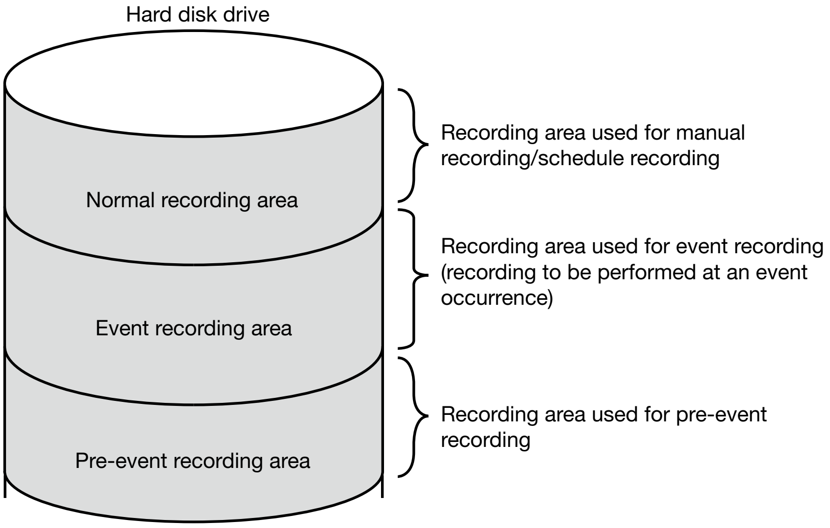
Record images

Live images can be recorded on the recorder. Images from up to 16 cameras can be recorded on a single recorder.


Camera
Image data
Hard disk drive
Recorder

Recording areas on the hard disk drive

The hard disk drives in the recorder are managed as the following 3 recording areas configured virtually. The settings of the recording areas can be configured on the "Disk config." Window. (☞ Installation Guide) Only a single recording area can be set to a single hard disk drive.


Hard disk drive
Normal recording area
Event recording area
Pre-event recording area
Recording area used for manual recording/schedule recording
Recording area used for event recording (recording to be performed at an event occurrence)
Recording area used for pre-event recording

Normal recording area
Recording area used for manual recording/schedule recording (recordings other than event recording)

Event recording area
Recording area used for event recording (post-event recording, emergency recording)

Pre-event recording area
Recording area used for pre-event recording (recording images before an event occurrence)

Record images (Manual recording)

Recording can be started and stopped manually.

Operation using the buttons on the front panel

Step 1

Press the [REC] button.
→ The [REC] button will light and recording will start.

Step 2

To stop recording, hold down the [REC] button for 2 seconds or more.
→ The [REC] button will go off and recording will stop.

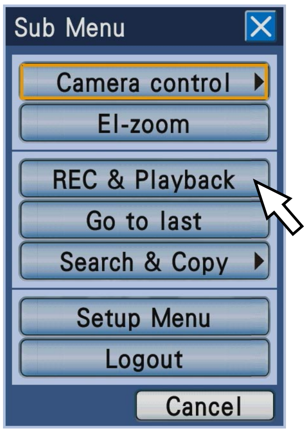
Operations using a mouse

Step 1

Click the [S.Menu] button.
→ The submenu window will be displayed.

Step 2

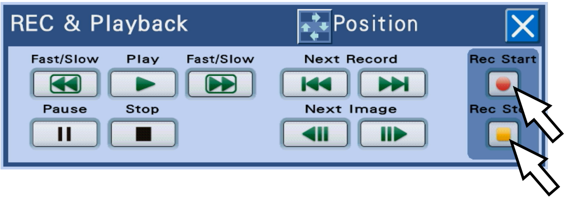
Click the [REC & Playback] button.


Sub Menu
Camera control
El-zoom
REC & Playback
Go to last
Search & Copy
Setup Menu
Logout
Cancel

→ The REC & playback panel will be displayed.

Step 3

Click the [Rec Start] button.


REC & Playback
Position
Fast/Slow
Play
Fast/Slow
Next Record
Rec Start
Pause
Stop
Next Image
Rec St

→ Recording will start.

Step 4

To stop recording, press the [Rec Stop] button.
→ When the [OK] button on the displayed confirmation window is clicked, recording will stop.

Note:

- When a recording with higher priority than manual recording is being performed, manual recording will be suspended until that recording finishes. Refer to the "Recording mode and its priority level" section below for further information about the priority of the recording mode.
- When trying to stop manual recording by holding down the [REC] button for 2 seconds or more while another recording with a different recording mode (emergency recording, event recording and schedule recording) is being performed, the [REC] indicator (on the [REC] button) will remain lit and the other recording will continue.
- No image will be recorded when no image data is being sent from the camera. When image data is sent, recording will start.
- Images (data) recorded by manual recording or schedule recording will be divided into multiple files every hour on the hour. In that moment, recording may sometimes be interrupted around for 1 second.

Recording mode and its priority level

There are 5 recording modes. The recording modes and their priority levels are as follows.
When two or more recordings with different recording modes started simultaneously, only recording with the higher priority will start.

Recording mode	Priority level
Emergency recording	1
Post-event recording	2
Manual rec. operation	3
Schedule recording	4
Pre-event recording	5

Emergency recording

Recording that is performed manually using an external switch, etc. when an emergency occurs.
For example, when an external switch is installed at the reception area, it is possible to start recording by pressing the installed external switch if a receptionist thinks suspicious about a person around the reception area, etc.

Step 1

Press the external switch to start recording.
→ The [REC] button will light and the emergency recording will start.

Step 2

When the set recording duration has passed, the emergency recording will automatically stop.
The recording duration for the emergency recording can be set on the setup menu ("Recording duration" on the "Emergency recording" tab under "Basic" (☞ Installation Guide)).

Note:

- The emergency recording is the recording mode with the highest priority.
  Even when another recording is being performed, the emergency recording will be performed prior to that recording.
- When "Continue" is selected for "Recording duration" (☞ Installation Guide) on the "Emergency recording" tab under "Emergency recording" of the setup menu, it is necessary to press the [ALARM RESET] button to stop the emergency recording. The [REC] button will go off and recording will stop.

Play recorded images

Images recorded on the recorder will be displayed on monitor 2.
Playback images will be displayed on monitor 2. Playback operation can be made while recording.

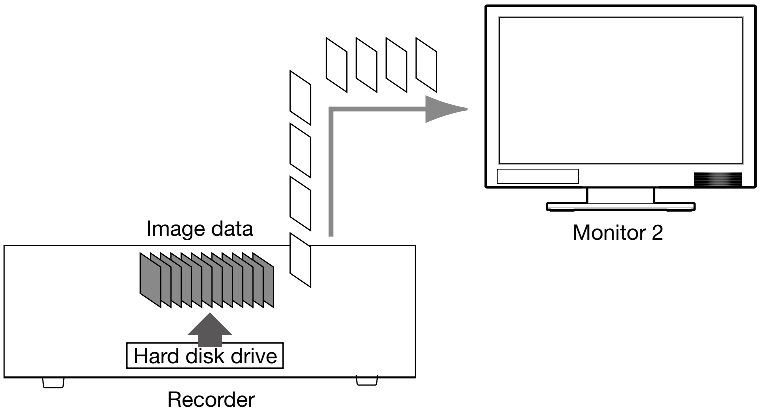


Image data
Hard disk drive
Recorder
Monitor 2

Operation using the buttons on the front panel

Step 1

Press the [PLAY/PAUSE] button.

→ The [PLAY/PAUSE] button will light and playback of images recorded using the selected camera channel will start.

The playback start point varies depending on how many times playback is performed after the login as follows.

- **The first playback after logging in to the recorder**
  The latest recorded image will be played. The playback start point can be set on the setup menu ("Latest image position" on the "Basic" tab under "Basic") (☞ Installation Guide). "30 seconds before the latest" is selected at the default.
- **Other than above (The second and subsequent playback after logging in to the recorder.)**
  Playback will start from the point at which the last playback was stopped (time and date).

Operations using a mouse

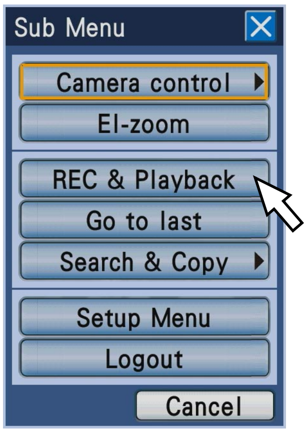
Step 1

Click the [S.Menu] button.

→ The submenu window will be displayed.

Step 2

Click the [REC & Playback] button.


Sub Menu
Camera control
El-zoom
REC & Playback
Go to last
Search & Copy
Setup Menu
Logout
Cancel

→ The REC & playback control panel will be displayed.

Operation using the buttons on the front panel

Step 2

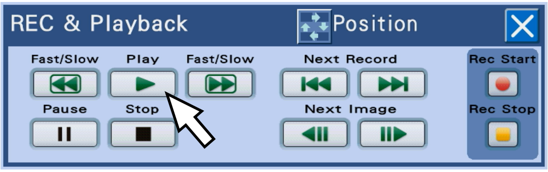
To stop the playback, press the [STOP] button.

→ The [PLAY/PAUSE] button will go off and playback will stop. Playback on monitor 2 will be switched to live image display.

Operations using a mouse

Step 3

Click the [Play] button.


REC & Playback
Position
Fast/Slow
Play
Fast/Slow
Next Record
Rec Start
Pause
Stop
Next Image
Rec Stop

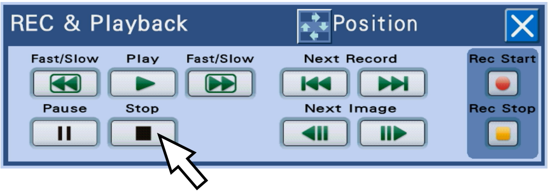
→ Playback will start.

The playback start point varies depending on how many times playback is performed after the login as follows.

- **The first playback after logging in to the recorder**
  The latest recorded image will be played. The playback start point can be set on the setup menu ("Latest image position" on the "Basic" tab under "Basic") (☞ Installation Guide). "30 seconds before the latest" is selected at the default.
- **Other than above (The second and subsequent playback after logging in to the recorder.)**
  Playback will start from the point at which the last playback was stopped (time and date).

Step 4

To stop playback, press the [Stop] button.

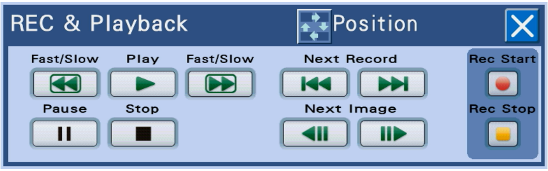
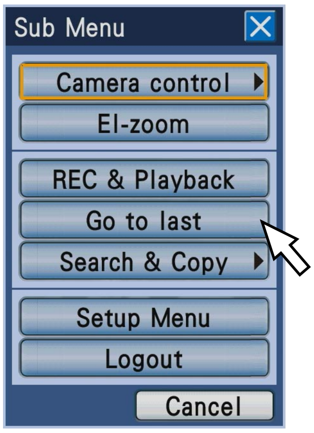
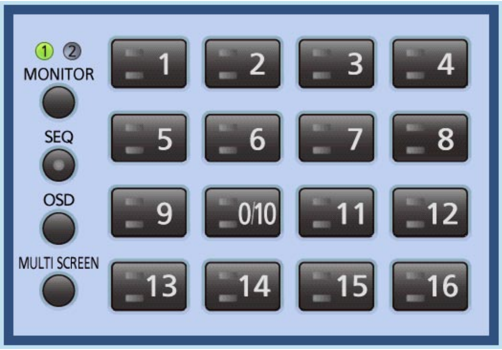

REC & Playback
Position
Fast/Slow
Play
Fast/Slow
Next Record
Rec Start
Pause
Stop
Next Image
Rec Stop

→ Playback will stop.
Playback on monitor 2 will be switched to live image display.

Functions during playback (when using the buttons on the front panel)

Function	Button	Operation
Pause	[PLAY/PAUSE] button	• Playback will resume when this button is pressed during pause. • The [PLAY/PAUSE] button will blink during pausing.
Frame by frame playback/Reverse frame by frame playback	Jog dial (Inside)	• When rotating the jog dial (inside) during pausing, frame by frame playback will be performed. • When rotating the jog dial clockwise, the next frame will be displayed. When rotating the jog dial counterclockwise, the previous frame will be displayed.
Fast forward/Fast rewind	Shuttle ring (Outside)	• When rotating the shuttle ring (outside), the playback speed will change (1/2x, 1x, 2x, 5x, 10x, 20x) according to how much (angle) the shuttle ring is rotated. When the playback continued at 20x (rotated the shuttle ring to the end) for 10 seconds, the playback speed will change to 50x. When the playback continued at 50x for 10 seconds, the playback speed will change to 100x. • When rotating the shuttle ring clockwise, fast forward playback will be performed. When rotating the jog dial counterclockwise, fast reverse playback will be performed. When the shuttle ring position is returned to the normal position (center), the playback speed will return to 1x.
Hold playback speed (Fast forward/Fast rewind)	[HOLD] button	• When the [HOLD] button is pressed while rotating the shuttle ring (outside) during playback, the playback speed determined by the shuttle ring position will be held. (Even when the shuttle ring (outside) is released, playback will continue with the determined playback speed.) The indicator will blink during the hold playback. • When the [HOLD] button is pressed during the playback speed is held, the held playback speed will return to x1.
Skip	Jog dial (Inside)	• When the jog dial (inside) is rotated during playback, playback point will skip to the top of the next or previous recorded data and start playback. • When rotating the jog dial (inside) clockwise during playback, the playback point will skip to the top of the next recorded data. When rotating the jog dial (inside) counterclockwise during playback, the playback point will skip to the top of the previous recorded data. • When trying to skip forward even during reverse playback, the playback point will skip to the top of the next recorded data (start time of the next recorded data). However, skipping to the next recorded data works only this time and the subsequent skip operation will not work. • When no next or previous recorded data, the current playback will continue.
Skip to the latest recorded data	[GOTO LAST] button	• When this button is pressed, playback from the top of the latest recorded data will start. At the default, pressing this button skips the playback point to a point that is 30 seconds before the top of the latest recorded data. **Note:** Playback of the latest recorded data may sometimes not start when the [GOTO LAST] button is pressed during recording.
Multiscreen playback	[MULTI SCREEN] button	• Press the [MULTI SCREEN] button. Each time the [MULTI SCREEN] button is pressed, the screen pattern will change according to the setting configured on the setup menu ("Camera setup" under "Multi screen setup" on the "Common" tab under "Display" (☞ Installation Guide)).
Camera title display	[OSD] button	• Press this button to display/hide the camera title and the status bar embedded on the recorded data. (☞ Page 30)

Functions during playback (when using the mouse)

Function	Operation
Pause Frame by frame playback/Reverse frame by frame playback Fast forward/Fast rewind Skip	Select "REC & Playback" from the submenu, and then operate the displayed "REC & Playback" panel.  REC & Playback Position Fast/Slow Play Fast/Slow Next Record Rec Start Pause Stop Next Image Rec Stop
Skip to the latest recorded data	Select "Go to last" from the submenu.  Sub Menu Camera control El-zoom REC & Playback Go to last Search & Copy Setup Menu Logout Cancel
Multiscreen playback Camera title display	Operate on the operation panel.  ① ② MONITOR SEQ OSD MULTI SCREEN 1 2 3 4 5 6 7 8 9 0/10 11 12 13 14 15 16

Note:

- When using the mouse, the playback speed will change each time the [Rew] button or the [FF] button is clicked. When the [Rew] button or the [FF] button is clicked during pausing, the playback speed will be 1/2.
- When displaying images on a 1-screen, audio assigned to the camera channel from which images are currently being displayed will be heard.
- When displaying images on a multiscreen, audio assigned to the camera channel from which images are currently being displayed at the upper left corner will be heard. When no audio is assigned to the camera (from which images are displayed on the segment at upper left corner), audio to be output will be determined in order of priority. When no audio is assigned to any of the camera channels from which images are currently being displayed on a multiscreen, no audio will be heard.
- When recording and playback is performed simultaneously, playback will be paused when the playback point reaches the current recording point (current time).
- When playing images recorded at a higher recording rate, the playback speed may sometimes become unstable or interrupted audio may be heard, etc.
- A black screen may sometimes be displayed during fast forward/fast rewind or fast forward playback/fast reverse playback. However, this is caused resulting from the internal process of the recorder and is not malfunction.

Play images from a designated point

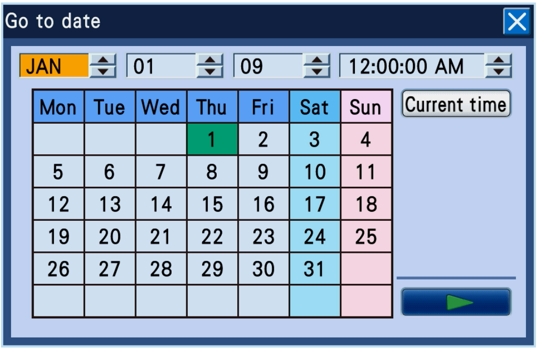
It is possible to start playback from a designated time and date or the latest recorded image.
Playback operation can be made while recording.
Playback images will be displayed on monitor 2.

Play image recorded at a designated time and date

Start playback by designating the desired time and date of a recorded image.

Step 1

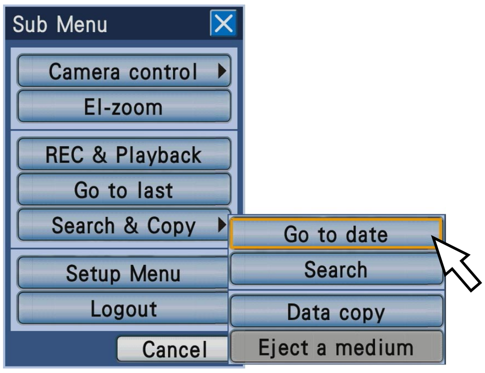
Press the [GOTO DATE] button on the front panel.
→ The "Go to date" window will be displayed.



JAN 01 09 12:00:00 AM

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Note:
- When using the mouse, click "Go to date" from the submenu to display the "Go to date" window.



Step 2

Set time and date by rotating the jog dial (inside).

Note:
- When the [SET] button is pressed after moving the cursor onto the [Current time] button, the current time and date will be entered.

Step 3

Move the cursor onto the [►] (play) button on the "Go to date" window, and then press the [SET] button.
→ The "Go to date" window will close and playback of recorded image from the entered time and date will start.

Note:
- When no image is found at the designated time and date, the following action will be taken.
  - When images recorded after the designated time and date are found, playback will start from the oldest recorded image among them.
  - When no image was recorded after the designated time and date, playback will start from the latest image recorded before the designated time and date.

Step 4

To stop the playback, press the [STOP] button on the front panel.
→ Playback will stop. Playback on monitor 2 will be switched to live image display.

Play the latest recorded image

Start playback of the latest recorded image.
The playback start point can be set on the setup menu ("Latest image position" on the "Basic" tab under "Basic") (☞ Installation Guide).
"30 seconds before the latest" is selected at the default.

Operation using the buttons on the front panel

Step 1

Press the [GOTO LAST] button when displaying live images.
→ The latest recorded image will be played.

Step 2

To stop the playback, press the [STOP] button on the front panel.
→ Playback will stop. Playback on monitor 2 will be switched to live image display.

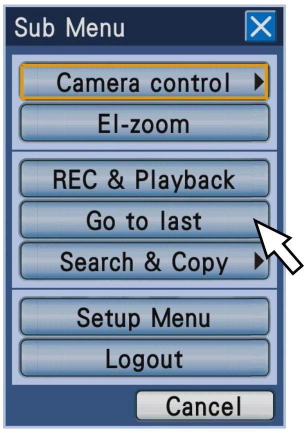
Operations using a mouse

Step 1

Click the [S.Menu] button.
→ The submenu window will be displayed.

Step 2

Click the [Go to last] button.


Sub Menu
Camera control
El-zoom
REC & Playback
Go to last
Search & Copy
Setup Menu
Logout
Cancel

→ The latest recorded image will be played.

Step 3

To stop the playback, display the "REC & Playback" panel and stop playback on it. (☞ Page 38)

Search and play

Search a desired recorded image and play it. There are the following 3 searching methods.

- Search for recording events and play (recording event search)
- Search for time and date when a motion was detected from recorded images and play (VMD search)
- Search for copied recorded images and play (copy data search)

Playback images will be displayed on a 1-screen on monitor 2. To play recorded images on a multiscreen, switch to a multiscreen after starting playback.

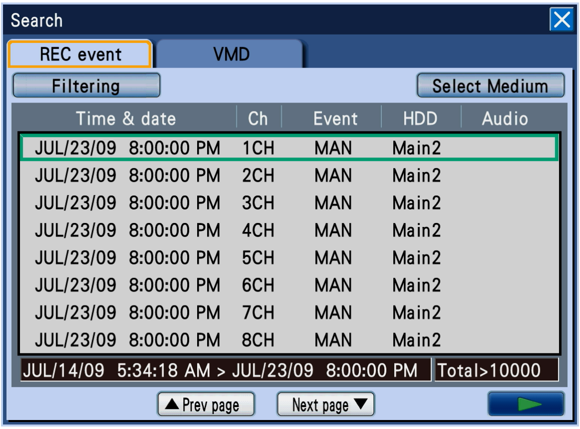
Search and play recording events (recording event search)

Display a list of recording events, and then select a desired recording event to play from the list.
It is also possible to filter recording events using the following search filters.

Search filter

Search filter	Description
Time & date	Search for images recorded in a time range designated by selecting the start time and the end time
Event	Search for images recorded by the selected recording mode only. • Recording mode/Event Manual recording, schedule recording, emergency recording, video loss, terminal alarm, command alarm, video motion detection (VMD), camera site alarm • i-VMD camera alarm Motion detection, object appearance/disappearance, terminal alarm, residence detection, direction detection, interruption detection
Camera	Search for images recorded using the selected camera channels only.

Recording event list



Time & date	Ch	Event	HDD	Audio
JUL/23/09 8:00:00 PM	1CH	MAN	Main2	
JUL/23/09 8:00:00 PM	2CH	MAN	Main2	
JUL/23/09 8:00:00 PM	3CH	MAN	Main2	
JUL/23/09 8:00:00 PM	4CH	MAN	Main2	
JUL/23/09 8:00:00 PM	5CH	MAN	Main2	
JUL/23/09 8:00:00 PM	6CH	MAN	Main2	
JUL/23/09 8:00:00 PM	7CH	MAN	Main2	
JUL/23/09 8:00:00 PM	8CH	MAN	Main2	

JUL/14/09 5:34:18 AM > JUL/23/09 8:00:00 PM Total>10000

[Filtering]
Displays the search filter window on which the search filters can be specified.

[Select Medium] button
Displays the disk selection window on which a media (HDD, DVD, SDHC/SD memory card) subject to play can be selected.

Time & date
Displays the start time and date of the recording.

Ch
Displays the camera channel used for recording. Playback of images recorded using the displayed camera channel will start on a 1-screen.

Event
Displays the event type. Refer to page 8 for further information about the event type.

HDD
Displays the hard disk drive number on which images were recorded.

Audio
Displays the icon to indicate whether audio is attached to the data or not.

Time and date range of the listed data
Displays a time and date range of the listed data.

Number of the listed data (Total)
Displays the total number of listed data. When more than 10 000 data matched, the ">10000" indication will be displayed.

[Prev page] button
Displays the previous page.

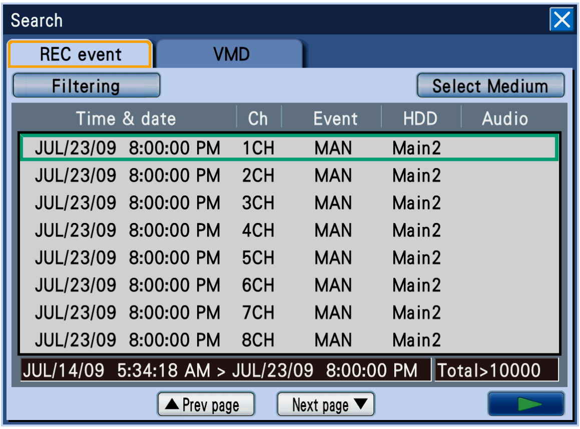
[Next page] button
Displays the next page.

[►] (play) button
Starts playback of recorded images of the selected recording event.

How to operate

Step 1

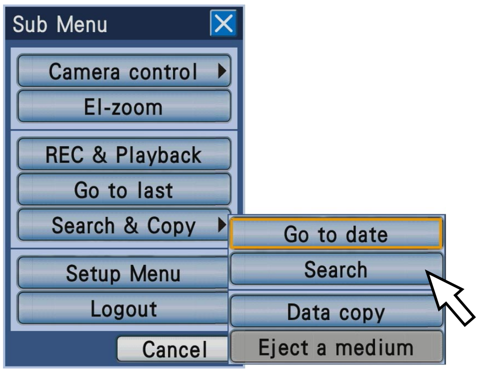
Press the [SEARCH] button on the front panel.
→ The recording event list window will be displayed.


Search
REC event
VMD
Filtering
Select Medium
Prev page
Next page

Time & date	Ch	Event	HDD	Audio
JUL/23/09 8:00:00 PM	1CH	MAN	Main2	
JUL/23/09 8:00:00 PM	2CH	MAN	Main2	
JUL/23/09 8:00:00 PM	3CH	MAN	Main2	
JUL/23/09 8:00:00 PM	4CH	MAN	Main2	
JUL/23/09 8:00:00 PM	5CH	MAN	Main2	
JUL/23/09 8:00:00 PM	6CH	MAN	Main2	
JUL/23/09 8:00:00 PM	7CH	MAN	Main2	
JUL/23/09 8:00:00 PM	8CH	MAN	Main2	

JUL/14/09 5:34:18 AM > JUL/23/09 8:00:00 PM Total>10000

Note:
- When using the mouse, click "Search" from the submenu to display the recording event list window.

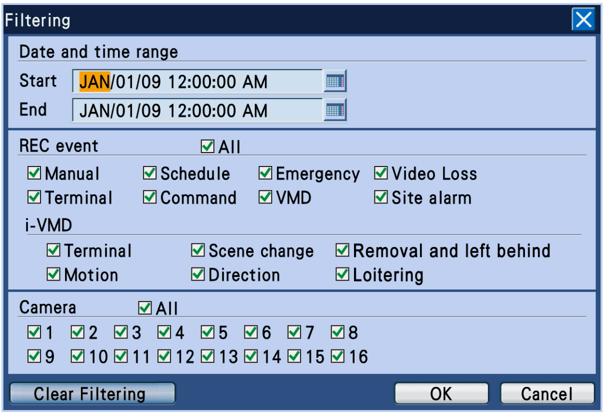

Sub Menu
Camera control
El-zoom
REC & Playback
Go to last
Search & Copy
Setup Menu
Logout
Cancel
Go to date
Search
Data copy
Eject a medium

Step 2

Select search filters. Move the cursor onto [Filtering] by pressing the [SET] button on the front panel, and then press the [SET] button on the front panel.
→ The "Filtering" window will be displayed.

Step 3

Specify the search conditions (filters).



Date and time range

Start JAN/01/09 12:00:00 AM

End JAN/01/09 12:00:00 AM

REC event ☑All

☑Manual ☑Schedule ☑Emergency ☑Video Loss

☑Terminal ☑Command ☑VMD ☑Site alarm

i-VMD

☑Terminal ☑Scene change ☑Removal and left behind

☑Motion ☑Direction ☑Loitering

Camera ☑All

☑1 ☑2 ☑3 ☑4 ☑5 ☑6 ☑7 ☑8

☑9 ☑10 ☑11 ☑12 ☑13 ☑14 ☑15 ☑16

Date and time range: Designate the recording start time and date and the end time and date of recorded images to be searched for by rotating the jog dial (inside).
Move the cursor onto the entry field, and then press the [SET] button. The software keyboard (for time and date entry) will be displayed and the time and date can be entered using it. Refer to pages 21 and 25 for how to use the software keyboard (for time and date entry).

REC event: Select an event type of recorded images to be searched for from the following. The checkbox respective to the selected event type will be checked. (When selecting "All", all the checkboxes will be checked.)

- **Event**
  Manual recording, schedule recording, emergency recording, video loss, terminal alarm, command alarm, video motion detection (VMD), camera site alarm
- **i-VMD**
  Motion detection, object appearance/disappearance, terminal alarm, residence detection, direction detection, interruption detection

Camera: Select the desired camera channel used for recording to be searched.
The checkbox respective to the selected camera channel will be checked. To select all camera channels, select "All".

[Clear Filtering] button: Cancels the specified search conditions (filters).
Values for the start time and the end time of "Date and time range" will become the same, and all the checkboxes for "REC event" and "Camera" will be checked.

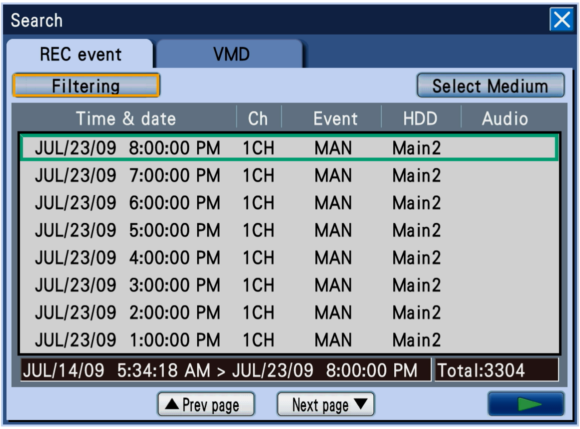
Step 4

Move the cursor onto [OK] after specifying the search conditions (filters), and then press the [SET] button on the front panel.

→ Recording events matched the search conditions will be displayed in the recording event list.

Step 5

Select the desired recording event to play. To select a recording event, rotate the jog dial (inside).



Time & date	Ch	Event	HDD	Audio
JUL/23/09 8:00:00 PM	1CH	MAN	Main2	
JUL/23/09 7:00:00 PM	1CH	MAN	Main2	
JUL/23/09 6:00:00 PM	1CH	MAN	Main2	
JUL/23/09 5:00:00 PM	1CH	MAN	Main2	
JUL/23/09 4:00:00 PM	1CH	MAN	Main2	
JUL/23/09 3:00:00 PM	1CH	MAN	Main2	
JUL/23/09 2:00:00 PM	1CH	MAN	Main2	
JUL/23/09 1:00:00 PM	1CH	MAN	Main2	

JUL/14/09 5:34:18 AM > JUL/23/09 8:00:00 PM Total:3304

Note:

- When the shuttle ring (outside) is rotated, the previous/next page of the list will be displayed.

Step 6

Move the cursor onto the [►] (play) button, and then press the [SET] button on the front panel.

→ Playback of recorded images of the selected recording event will start.

Step 7

To stop the playback, press the [STOP] button on the front panel.

→ Playback will stop. Playback on monitor 2 will be switched to live image display.

Note:

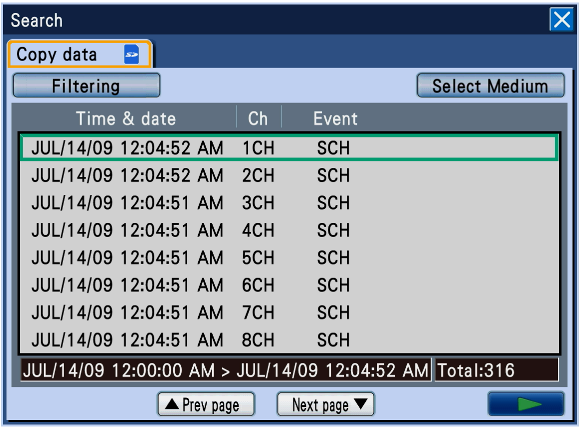
- When starting playback from the displayed recording event list after filtering, only recorded images of the listed recording events are subject to play. It is possible to make all recorded images available to play by stopping the playback and starting playback again.

Search for copied recorded images and play (copy data search)

Display a list of copied data (copied recorded images) on an SDHC/SD memory card or a DVD, and then select a desired recorded image to play from the list.

It is possible to search for copied data using the filters. Available filters are "Time & date" and "Ch". Refer to page 59 for how to copy recorded images.

Copied data list window



Time & date	Ch	Event
JUL/14/09 12:04:52 AM	1CH	SCH
JUL/14/09 12:04:52 AM	2CH	SCH
JUL/14/09 12:04:51 AM	3CH	SCH
JUL/14/09 12:04:51 AM	4CH	SCH
JUL/14/09 12:04:51 AM	5CH	SCH
JUL/14/09 12:04:51 AM	6CH	SCH
JUL/14/09 12:04:51 AM	7CH	SCH
JUL/14/09 12:04:51 AM	8CH	SCH

JUL/14/09 12:00:00 AM > JUL/14/09 12:04:52 AM Total:316

[Filtering] button
Displays the search filter window on which the search filters can be specified.

[Select Medium] button
Displays the disk selection window on which a media (HDD, SDHC/SD memory card, DVD) subject to play can be selected.

Time & date
Displays the start time and date of the copied data (time and date when copying started) will be displayed.

Ch
Displays the camera channel used for recording (of which copied recorded images). Playback of images recorded using the displayed camera channel will start on a 1-screen.

Event
Displays the event type. Refer to page 8 for further information about the event type.

Number of the listed data
Displays a time and date range of the listed data.

Number of the listed data (Total)
Displays the total number of listed copied data. When more than 10 000 data matched, the ">10000" indication will be displayed.

[Prev page] button
Displays the previous page.

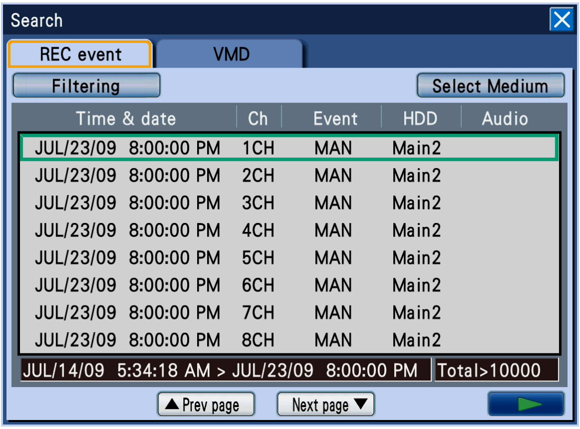
[Next page] button
Displays the next page.

[►] (play) button
Starts playback of recorded images of the selected copied data.

How to operate

Step 1

Press the [SEARCH] button on the front panel.
→ The recording event list window will be displayed.

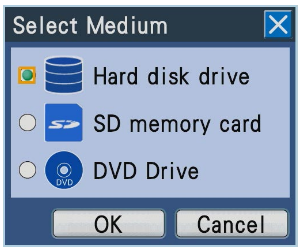

Search
REC event
VMD
Filtering
Select Medium
Prev page
Next page

Time & date	Ch	Event	HDD	Audio
JUL/23/09 8:00:00 PM	1CH	MAN	Main2	
JUL/23/09 8:00:00 PM	2CH	MAN	Main2	
JUL/23/09 8:00:00 PM	3CH	MAN	Main2	
JUL/23/09 8:00:00 PM	4CH	MAN	Main2	
JUL/23/09 8:00:00 PM	5CH	MAN	Main2	
JUL/23/09 8:00:00 PM	6CH	MAN	Main2	
JUL/23/09 8:00:00 PM	7CH	MAN	Main2	
JUL/23/09 8:00:00 PM	8CH	MAN	Main2	

JUL/14/09 5:34:18 AM > JUL/23/09 8:00:00 PM Total>10000

Step 2

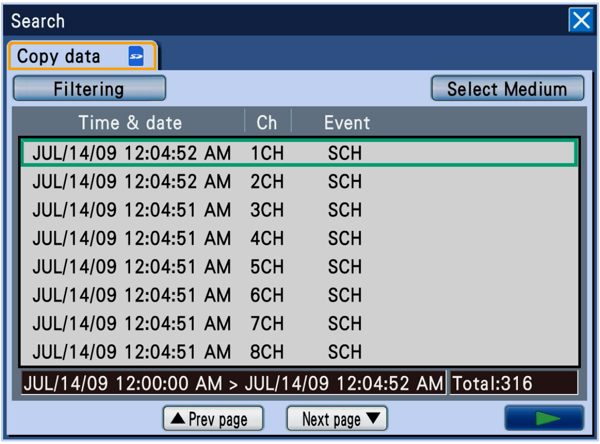
Move the cursor into the recording event tab and move the cursor onto the [Select Medium] button. Then, press the [SET] button on the front panel.
→ The "Select Medium" window will be displayed.


Select Medium
OK
Cancel

● Hard disk drive
○ SD memory card
○ DVD Drive

Step 3

Select the media to be searched. Select "DVD Drive" or "SD memory card" by pressing the [SET] button, and then press the [SET] button again after moving the cursor onto the [OK] button.
→ The copied data list window will be displayed.


Search
Copy data
Filtering
Select Medium
Prev page
Next page

Time & date	Ch	Event
JUL/14/09 12:04:52 AM	1CH	SCH
JUL/14/09 12:04:52 AM	2CH	SCH
JUL/14/09 12:04:51 AM	3CH	SCH
JUL/14/09 12:04:51 AM	4CH	SCH
JUL/14/09 12:04:51 AM	5CH	SCH
JUL/14/09 12:04:51 AM	6CH	SCH
JUL/14/09 12:04:51 AM	7CH	SCH
JUL/14/09 12:04:51 AM	8CH	SCH

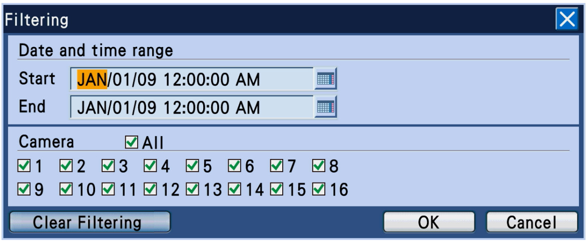
JUL/14/09 12:00:00 AM > JUL/14/09 12:04:52 AM Total:316

Note:

- When selecting "DVD Drive" even though an optional built-in DVD drive is not installed, the error message of "No media is inserted" will be displayed.

Step 4

Select search filters. Move the cursor onto the [Filtering] button, and then press the [SET] button on the front panel.
→ The "Filtering" window will be displayed.


Filtering
Clear Filtering
OK
Cancel

Date and time range
Start JAN/01/09 12:00:00 AM
End JAN/01/09 12:00:00 AM

Camera ☑All
☑1 ☑2 ☑3 ☑4 ☑5 ☑6 ☑7 ☑8
☑9 ☑10 ☑11 ☑12 ☑13 ☑14 ☑15 ☑16

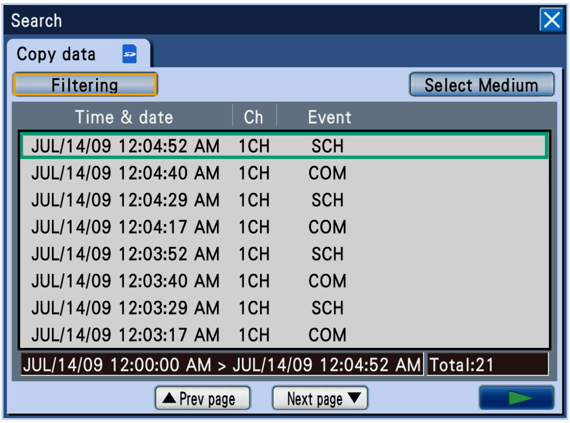
Step 5

Specify the search conditions (filters). Refer to page 47 for further information about the search filters.

Step 6

After specifying the search conditions (filters), press the [SET] button after moving the cursor onto the [OK] button.

→ Copied data matched the search conditions (filters) will be displayed on the copied data list window.

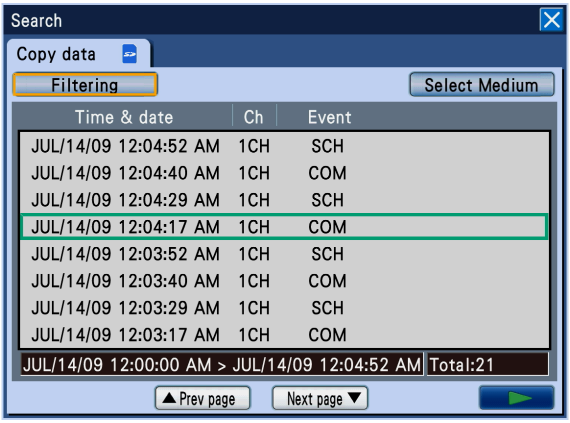


Time & date	Ch	Event
JUL/14/09 12:04:52 AM	1CH	SCH
JUL/14/09 12:04:40 AM	1CH	COM
JUL/14/09 12:04:29 AM	1CH	SCH
JUL/14/09 12:04:17 AM	1CH	COM
JUL/14/09 12:03:52 AM	1CH	SCH
JUL/14/09 12:03:40 AM	1CH	COM
JUL/14/09 12:03:29 AM	1CH	SCH
JUL/14/09 12:03:17 AM	1CH	COM

JUL/14/09 12:00:00 AM > JUL/14/09 12:04:52 AM Total:21

Step 7

Select the desired copied data to play. To select a copied data, rotate the jog dial (inside).



Time & date	Ch	Event
JUL/14/09 12:04:52 AM	1CH	SCH
JUL/14/09 12:04:40 AM	1CH	COM
JUL/14/09 12:04:29 AM	1CH	SCH
JUL/14/09 12:04:17 AM	1CH	COM
JUL/14/09 12:03:52 AM	1CH	SCH
JUL/14/09 12:03:40 AM	1CH	COM
JUL/14/09 12:03:29 AM	1CH	SCH
JUL/14/09 12:03:17 AM	1CH	COM

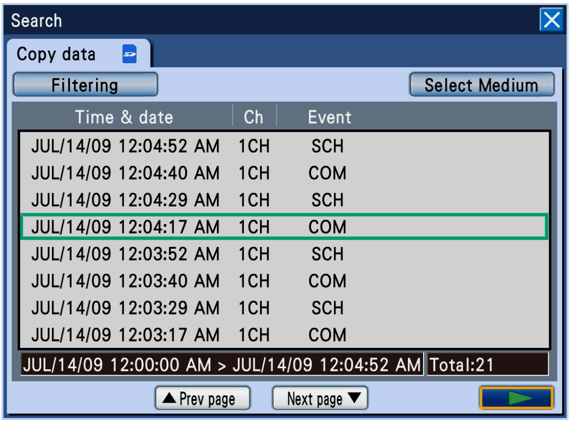
JUL/14/09 12:00:00 AM > JUL/14/09 12:04:52 AM Total:21

Note:

- When the shuttle ring (outside) is rotated, the previous/next page of the list will be displayed.

Step 8

Move the cursor onto the [►] (play) button, and then press the [SET] button.



Time & date	Ch	Event
JUL/14/09 12:04:52 AM	1CH	SCH
JUL/14/09 12:04:40 AM	1CH	COM
JUL/14/09 12:04:29 AM	1CH	SCH
JUL/14/09 12:04:17 AM	1CH	COM
JUL/14/09 12:03:52 AM	1CH	SCH
JUL/14/09 12:03:40 AM	1CH	COM
JUL/14/09 12:03:29 AM	1CH	SCH
JUL/14/09 12:03:17 AM	1CH	COM

JUL/14/09 12:00:00 AM > JUL/14/09 12:04:52 AM Total:21

→ Playback of recorded images of the selected copied data will start.

Important:

- Do not remove the SDHC/SD memory card during playback of copied data on the SDHC/SD memory card. It may damage data on the SDHC/SD memory card.

Note:

- The following operations are unavailable duing playback of copied recorded images.
  - Go to last
  - Playback on a multiscreen
  - Playback of audio
- When there are multiple copied data that has the same start time, camera channel and event, only the data copied first will be played when any of them is selected.

Step 9

To stop the playback, press the [STOP] button on the front panel.

→ Playback will stop. Playback on monitor 2 will be switched to live image display.

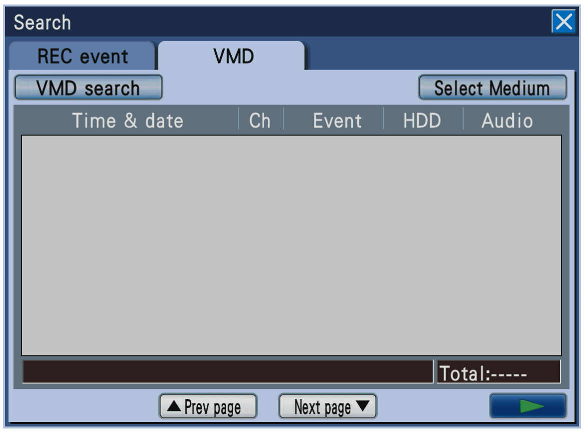
Note:

- When starting playback from the displayed copied data list after filtering, only recorded images of the listed copied data are subject to play. It is possible to make all recorded images available to play by stopping the playback and starting playback again.
- When starting playback after inserting the other SDHC/SD memory card, select "Hard disk drive" on the "Select Medium" window first and then select "SD memory card".

Search for time and date when a motion was detected from recorded images and play (VMD search)

Display a list of time and date when a motion was detected (by the VMD function) from images recorded by all the recording modes (☞ page 37), and then select a desired recorded image to play from the list.
Camera channels, time and date when a motion was detected, detection area and detection sensitivity can be used as the filters for the VMD search.

VMD search list window



[VMD search] button
Displays the search filter window on which the search filters can be specified.

[Select Medium] button
Displays the disk selection window on which a media (HDD, DVD, SDHC/SD memory card) subject to play can be selected.

Time & date
The time and date when the images were recorded will be displayed.

Ch
Displays the camera channel used for recording. Playback of images recorded using the displayed camera channel will start on a 1-screen.

Event
Displays the event type. Refer to page 8 for further information about the event type.

HDD
Displays the hard disk drive number on which images were recorded.

Audio
Displays the icon to indicate whether audio is attached to the data or not.

Number of the listed data
Displays a time and date range of the listed data.

Number of the listed data (Total)
Displays the total number of listed data. When more than 200 data matched, the ">200" indication will be displayed.

[Prev page] button
Displays the previous page.

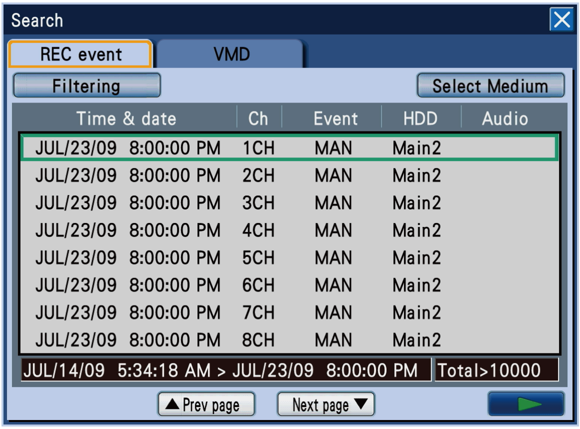
[Next page] button
Displays the next page.

[►] (play) button
It is possible to play the selected recorded image.

How to operate

Step 1

Press the [SEARCH] button on the front panel.
→ The recording event list window will be displayed.

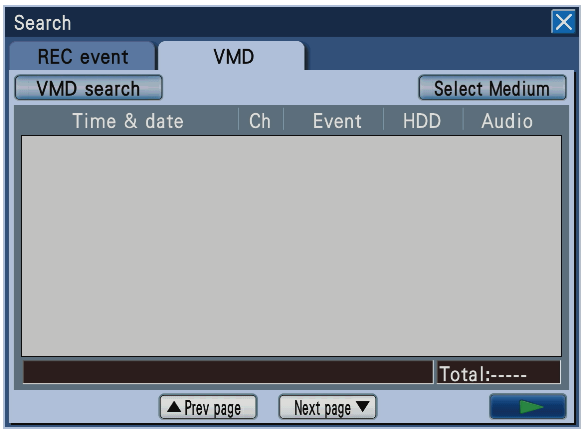

Search
REC event
VMD
Filtering
Select Medium
Prev page
Next page

Time & date	Ch	Event	HDD	Audio
JUL/23/09 8:00:00 PM	1CH	MAN	Main2	
JUL/23/09 8:00:00 PM	2CH	MAN	Main2	
JUL/23/09 8:00:00 PM	3CH	MAN	Main2	
JUL/23/09 8:00:00 PM	4CH	MAN	Main2	
JUL/23/09 8:00:00 PM	5CH	MAN	Main2	
JUL/23/09 8:00:00 PM	6CH	MAN	Main2	
JUL/23/09 8:00:00 PM	7CH	MAN	Main2	
JUL/23/09 8:00:00 PM	8CH	MAN	Main2	

JUL/14/09 5:34:18 AM > JUL/23/09 8:00:00 PM Total>10000

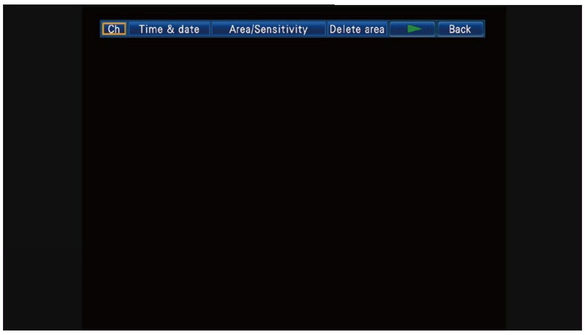
Step 2

Move the cursor onto the [VMD] tab, and then press the [SET] button on the front panel.
→ The "VMD" tab page will be displayed.


Search
REC event
VMD
VMD search
Select Medium
Time & date
Ch
Event
HDD
Audio
Total:-----
Prev page
Next page

Step 3

Designate the search filters.
Move the cursor onto the [VMD search] button, and then press the [SET] button on the front panel.
→ The search filter window will be displayed.

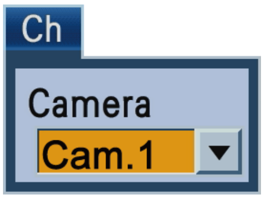

Ch
Time & date
Area/Sensitivity
Delete area
Back

Step 4

Specify the VMD search conditions.
When the [SET] button is pressed after moving the cursor onto a button relating to a search condition, the setup window respective to the selected search condition.
When completing the VMD search condition setting, press the [SET/ESC] button to close the search filter window.

Select camera channels

Move the cursor onto the [Ch] button, and then press the [SET] button.
→ The camera channel setup menu will be displayed.



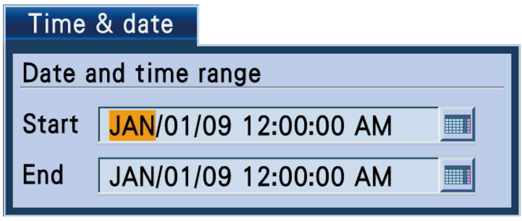
Camera
Cam.1

To select a camera channel, rotate the jog dial (inside).

Specify the time range

Move the cursor onto the [Time & date] button, and then press the [SET] button.

→ The time & date setup menu will be displayed.



Time & date

Date and time range

Start JAN/01/09 12:00:00 AM

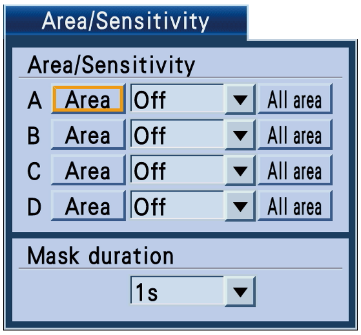
End JAN/01/09 12:00:00 AM

Specify the time range by rotating the jog dial (inside). Move the cursor onto the entry field, and then press the [SET] button. The software keyboard (for time and date entry) will be displayed and the time and date can be entered using it. Refer to pages 21 and 25 for how to use the software keyboard (for time and date entry).

Filter by detection area or detection sensitivity

Move the cursor onto the [Sensitivity] button, and then press the [SET] button.

→ The sensitivity setup menu will be displayed.



Area/Sensitivity

Area/Sensitivity

A Area Off All area

B Area Off All area

C Area Off All area

D Area Off All area

Mask duration

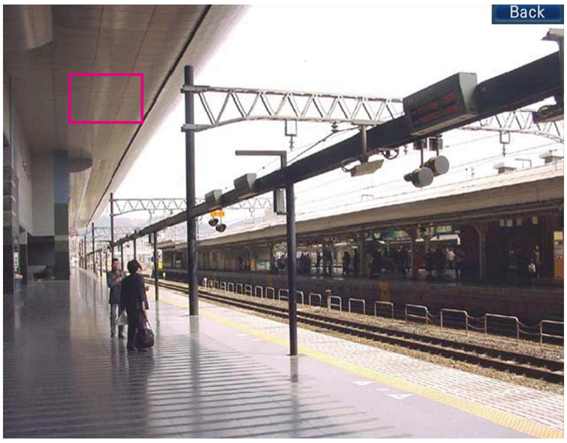
1s

Up to 4 detection areas (A - D) can be set. It is also possible to set the whole displayed area as the detection area by pressing the [SET] button after moving the cursor onto the [All Area] button.

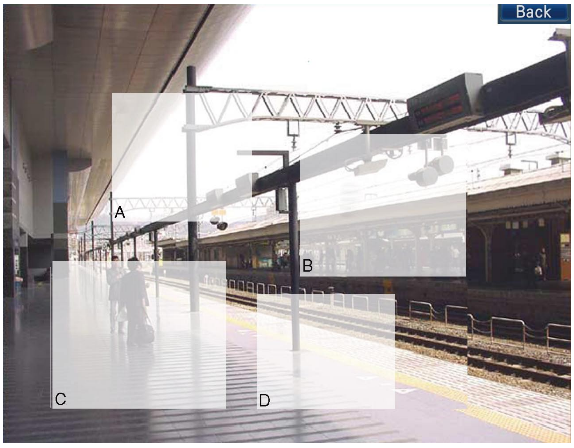
Set detection areas and detection sensitivities for each of them as follows.

1. Move the cursor onto the [Area] button of any of the detection area (A - D), and then press the [SET] button.

2. Set the start point of the detection area.
   Move the cursor to a point to be set as the start point of the detection area using the arrows button (▼ ▲ ◄ ►), and then press the [SET] button.



3. Set the end point of the detection area.
   Move the cursor to a point to be set as the end point of the detection area using the arrows button (▼ ▲ ◄ ►), and then press the [SET] button.
   Up to 4 detection areas can be set by repeating steps 1 - 3.



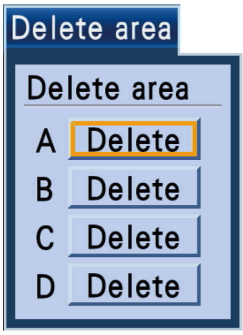
→ The area setup window will be displayed again.

Note:

- When creating a detection area, drag to the lower right from the start point to determine the end point. It is impossible to determine the end point when dragging to any direction other than to the lower right.

Note:

- To delete the set detection area, take the following procedures.
  1. Move the cursor onto the [Area delete] button on the search filter window, and then press the [SET] button.
  2. Move the cursor onto the [Area] button of any of the detection area (A - D), and then press the [SET] button.



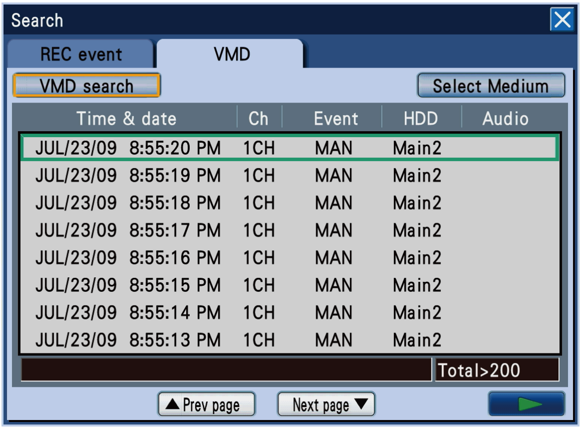
4. Set the detection sensitivity of each detection area.
   Move the cursor onto "Sensitivity" of the detection area to be set, and then rotate the jog dial (inside) to select the detection sensitivity from the following.
   Off: Does not detect motion in the selected area.
   Low: Low sensitivity
   Mid: Standard sensitivity
   High: High sensitivity

5. Set the mask duration of each detection area.
   When the mask duration is set, any motion will not be detected for the set duration after a motion detection. Use the mask duration when it takes time to detect motion or when motion is detected frequently.
   Rotate the jog dial (inside) to select the detection sensitivity from the following.
   1 s, 1 min, 1 h, 24h

Step 5

After specifying the search conditions (filters), press the [SET] button after moving the cursor onto the [►] button.

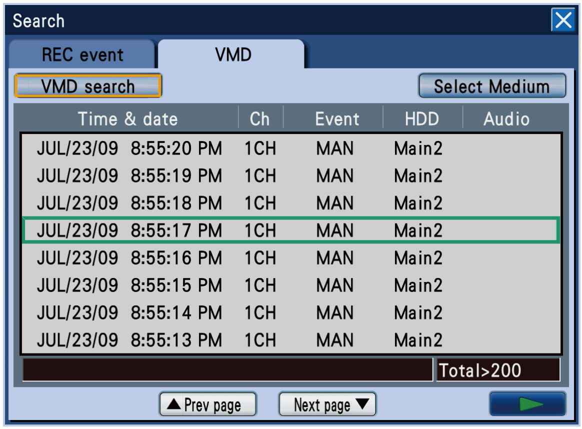
→ Data matched the search conditions (filters) will be displayed on the VMD search list window.



Time & date	Ch	Event	HDD	Audio
JUL/23/09 8:55:20 PM	1CH	MAN	Main2	
JUL/23/09 8:55:19 PM	1CH	MAN	Main2	
JUL/23/09 8:55:18 PM	1CH	MAN	Main2	
JUL/23/09 8:55:17 PM	1CH	MAN	Main2	
JUL/23/09 8:55:16 PM	1CH	MAN	Main2	
JUL/23/09 8:55:15 PM	1CH	MAN	Main2	
JUL/23/09 8:55:14 PM	1CH	MAN	Main2	
JUL/23/09 8:55:13 PM	1CH	MAN	Main2	

Step 6

Select time and date of recorded data from the list to play. To select a recorded data in which motion was detected, rotate the jog dial (inside).



Time & date	Ch	Event	HDD	Audio
JUL/23/09 8:55:20 PM	1CH	MAN	Main2	
JUL/23/09 8:55:19 PM	1CH	MAN	Main2	
JUL/23/09 8:55:18 PM	1CH	MAN	Main2	
JUL/23/09 8:55:17 PM	1CH	MAN	Main2	
JUL/23/09 8:55:16 PM	1CH	MAN	Main2	
JUL/23/09 8:55:15 PM	1CH	MAN	Main2	
JUL/23/09 8:55:14 PM	1CH	MAN	Main2	
JUL/23/09 8:55:13 PM	1CH	MAN	Main2	

Note:

- When the shuttle ring (outside) is rotated, the previous/next page of the list will be displayed.

Step 7

Move the cursor onto the [►] (play) button, and then press the [SET] button. (Or press the [PLAY] button on the front panel.)

→ Playback of the selected recorded data (in which motion was detected) will be displayed.

Note:

- When selected time and date is too close to the current time and date, playback may sometimes not start. In this case, wait for a while and try to play again.

Step 8

To stop the playback, press the [STOP] button on the front panel.

→ Playback will stop. Playback on monitor 2 will be switched to live image display.

Note:

- When starting playback from the displayed VMD search list, only recorded images of the listed data are subject to play.
  To make all recorded images available to play, stop playback and start playback again.

Event function

The recorder will take an event action when any of the following events occur.

- Terminal alarm: Regarded as an event when an alarm input signal is supplied from an external device such as a door sensor to the alarm input terminal on the rear of the recorder.
- Video Motion Detection (VMD): Regard as an event when a motion is detected in images by the video motion detection function. (See below about the VMD function.)
- Video loss: Regard as an event when the video input signal is lost, such as by the camera cable disconnection, malfunction of the camera, etc.
- i-VMD camera alarm: Regarded as an event when an alarm (motion detection, object appearance/disappearance, etc.) is detected by the SD5Link camera.
- Camera site alarm: Regarded as an event when an alarm (motion detection, etc.) is detected by a camera.
- Command alarm: Regarded as an alarm when receiving an alarm from a PC, etc. via a network.

Note:

- Video Motion Detection (VMD) function
  When a motion (luminance change) is detected in the specified area (detection area), the recorder will regard this as an alarm detection.
  Refer to the Installation Guide for the settings required to use the video motion detection function.
- When the recorder is just after rebooted, an alarm detected by an SD5Link camera may sometimes be displayed as a camera site alarm. In a similar way, an alarm detected by an SD5Link camera connected to the encoder (WJ-MP204C) may be displayed as a command alarm.
- Cameras will provide a notification only when an alarm input is detected. Therefore, the recorder will not display an alarm occurrence indication when the recorder is booted while an alarm input is being supplied.

Event action

When an event occurs and the recorder detects the event occurrence, the recorder will take the event action according to the settings configured in advance.
The event action mode can be selected from the alarm mode (ALM), activity detection mode (ADM) and Off.
(☞ Installation Guide)
Refer to a system administrator for further information. A different event action will be taken depending on the selected event action mode.
When selecting the alarm mode (ALM), the recorder will take an alarm action.

Event action mode

- **Alarm mode (ALM)**
  When the alarm mode (ALM) is selected, notification of an event occurrence will be provided to outside the system. In this manual, event actions to be taken in the alarm mode are called "alarm action".
- **Activity detection mode (ADM)**
  When the activity detection mode (ADM) is selected, only recording and indication of an alarm occurrence will be performed at an event occurrence. No notification of event occurrence will be provided to any external device in the activity detection mode (ADM).
- **Off**
  Only filing logs of event occurrences will be performed. No other event action will be taken.

Event action	Alarm mode	Activity detection mode	Off
Start recording	○	○	X
Display event information on the screen	○	X	X
Blink the alarm indicator	○	X	X
Sound the buzzer	○	X	X
Switch to the camera channel in which an alarm occurred	○	X	X
Move a camera to the preset position	○	○	X
Send a mail that notifies of an event occurrence	○	X	X
Send a PS·Data command that notifies of an event occurrence	○	X	X
Output signals from the ALARM connector and the ALARM/CONTROL connector on the rear of the recorder	○	X	X
File event logs	○	○	○
Send recorded images to an FTP server	○	X	X
Provide an alarm notification to a PC according to the Panasonic alarm protocol setting	○	X	X

Cancel the alarm action

The recorder will take an alarm action according to the settings configured in advance when an event occurs in the alarm mode (ALM). To cancel the alarm action, press the [Alarm reset] button on the front panel or click the alarm icon on the status bar displayed on monitor 2.
When the "Alarm auto reset" setting on the "Common" tab under "Event" of the setup menu is set to "2s", "5s", "10s", "20s", "30s", "1min", "3min"or "5min" (☞ Installation Guide), the following actions will automatically be taken without canceling the alarm action by pressing the [Alarm reset] button.

- The alarm indicator on the front panel will stop blinking and light steadily.
- The event information displayed on the monitor will disappear.
- The sounding buzzer and the alarm output will stop.
- The camera where the alarm had occurred will return to the previous status.

Step 1

Press the [ALARM RESET] button. Press the [ALARM RESET] button or click the [ALM] icon on the status bar displayed on monitor 2.
→ The alarm action will be canceled and the alarm indicator will go off.

Note:

- When the alarm action is canceled, the event recording will stop and return to the operational status just before the event occurred.

Suspend the alarm action

Configure the settings to not to perform the alarm action even when an event occurs.
It is useful to suspend the alarm action for a certain period such as when configuring the settings of the recorder.
However, recording filing of event logs, preset position function and alarm occurrence indication (on monitor) will be performed even though the alarm action is being suspended.

Step 1

Press the [ALARM RESET] button and the [SET] button on the front panel simultaneously.

→ The alarm action will be suspended. The alarm suspension indicator will light.

Step 2

To cancel the alarm suspension, press the [ALARM RESET] button and the [SET] button simultaneously again.

→ The alarm suspension will be canceled and the alarm suspension indicator will go off.

Important:

- It is impossible to suspend alarm actions using the mouse.

Note:

- It is possible to disable the alarm actions by connecting an external switch to the ALARM/ CONTROL connector (pin no. 22: alarm suspension input terminal) on the rear of the recorder. When setting the external switch to "On", the alarm action will be suspended. To cancel the alarm suspension, set the external switch to "Off".

Cancel the error action

When an error (trouble) occurred on the recorder, the recorder will take the error action. To cancel the error action, press the [ALARM RESET] button on the front panel or click the error icon on the status bar displayed on monitor 2.

Note:

- Depending on the error type, the error indication by the status indicator on the front panel will not go off even when canceling the error action.

Copy recorded images

It is possible to manually copy images recorded in the recorder onto a DVD (DVD–R, DVD+R) or an SDHC/SD memory card.
It is recommended to make back-up copies on a regular basis for unexpected situations such as malfunction of the hard disk drives.
It is impossible to copy recorded images when the recorder is in the following statuses.

- When the copy window is being opened by other user
- When the media (SDHC/SD memory card/DVD) is being selected by other user
- When the setup menu is being displayed

The copied recorded images can be played on the recorder or on a PC using the dedicated viewer software.
The viewer software will automatically be copied on a media (DVD, SDHC/SD memory card) on which recorded images are copied.
Refer to page 108 for how to operate the viewer software.
Refer to page 48 for how to play the copied recorded images on the recorder.

Note:

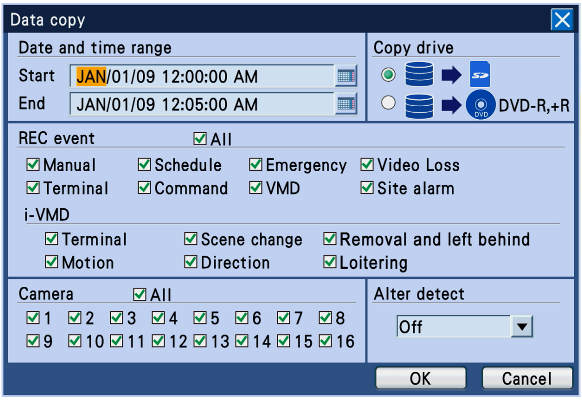
- Pause the playback before starting copying when playing recorded images on the recorder.
- To copy recorded images onto an SDHC/SD memory card, it is necessary to use the formatted SDHC/SD memory card. Refer to page 73 for how to format an SDHC/SD memory card.
- Required time for copying varies depending on the data size to be copied. It will take longer time to copy recorded images when they were recorded with a larger image capture size, in a higher quality or at a higher recording rate even though the same number of camera and the same duration are set for copying.
- Copying of recorded images may sometimes be performed incorrectly when there exist 2 or more images recorded at the same time and date resulting in change of the time and date setting or the auto time adjustment function.
- In the following cases, the copying currently being performed will stop.
  - When any of the settings of the recorder is changed
  - When a user who started manual copy logged out (It will take around 90 seconds until copying is stopped after the web browser is closed.)
  - When the original data (source for copying) is lost (overwritten or malfunction of the hard disk drive)
  - Copied data may contain private information. To prevent leakage of private information, manage media with great caution.

Step 1

Set a destination media (DVD, SDHC/SD memory card). (☞ Installation Guide)

Step 2

Press the [Copy] button on the front panel.
→ The data copy window will be displayed.



Data copy

Date and time range
Start JAN/01/09 12:00:00 AM
End JAN/01/09 12:05:00 AM

Copy drive
●
○ DVD-R,+R

REC event ☑All
☑Manual ☑Schedule ☑Emergency ☑Video Loss
☑Terminal ☑Command ☑VMD ☑Site alarm

i-VMD
☑Terminal ☑Scene change ☑Removal and left behind
☑Motion ☑Direction ☑Loitering

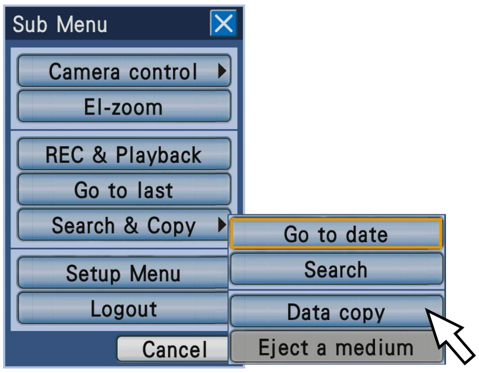
Camera ☑All
☑1 ☑2 ☑3 ☑4 ☑5 ☑6 ☑7 ☑8
☑9 ☑10 ☑11 ☑12 ☑13 ☑14 ☑15 ☑16

Alter detect
Off

OK Cancel

Note:

- When using a mouse, select "Data copy" from the submenu to display the data copy window.



Step 3

Specify the detailed conditions of recorded images to be copied.

Date and time range: Designate the start time and date and the end time and date of recorded images to be copied by rotating the jog dial (inside).
Move the cursor onto the entry field, and then press the [SET] button. The software keyboard (for time and date entry) will be displayed and the time and date can be entered using it.
Refer to pages 21 and 25 for how to use the software keyboard (for time and date entry).

Copy drive: Select a DVD or an SDHC/SD memory card as a copying destination.
Move the cursor onto "HDD → DVD" or "HDD → SDHC/SD memory card", and then press the [SET] button.

REC event: Select an event type of recorded images to be copied from the following. The checkbox respective to the selected event type will be checked. (When selecting "All", all the checkboxes will be checked.)

- REC event
  Manual recording, schedule recording, emergency recording, video loss, terminal alarm, command alarm, motion auto-detection, camera site alarm
- i-VMD
  Motion detection, object appearance/disappearance, terminal alarm, residence detection, direction detection, interruption detection

Camera: Select a camera channel used for recording.
Check the checkbox corresponding to the desired camera channel.

Alter detect: Determine whether or not to attach the alteration detection code to the recorded images to be copied.
When the alteration detection code is attached, it is possible to check if the copied recorded images have been altered or not when playing the copied recorded images using the viewer software.
Move the cursor onto "Alteration detection", and then select "On" or "Off" by rotating the jog dial (inside).

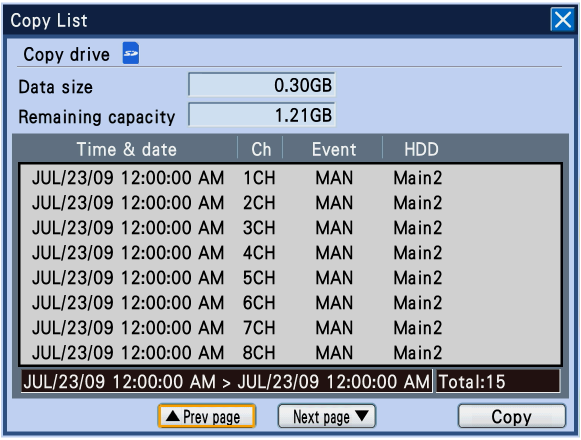
Note:

- Select the [Cancel] button to cancel the conditions for copying.
- When selecting "DVD" as the destination media even though an optional built-in DVD drive is not installed, the error message of "No media is inserted" will be displayed.

Step 4

Move the cursor onto [OK], and then press the [SET] button.

→ The copy data list will be displayed and the recorded images matched the set conditions will be displayed in list form on it.



Data size 0.30GB
Remaining capacity 1.21GB

Time & date	Ch	Event	HDD
JUL/23/09 12:00:00 AM	1CH	MAN	Main2
JUL/23/09 12:00:00 AM	2CH	MAN	Main2
JUL/23/09 12:00:00 AM	3CH	MAN	Main2
JUL/23/09 12:00:00 AM	4CH	MAN	Main2
JUL/23/09 12:00:00 AM	5CH	MAN	Main2
JUL/23/09 12:00:00 AM	6CH	MAN	Main2
JUL/23/09 12:00:00 AM	7CH	MAN	Main2
JUL/23/09 12:00:00 AM	8CH	MAN	Main2

JUL/23/09 12:00:00 AM > JUL/23/09 12:00:00 AM Total:15

Copying destination: The copying destination selected on the copy data window will be displayed.
DVD/SD

Data size: The total size of the listed recorded images will be displayed.
The displayed total size includes the viewer software. It may take several minutes to display the total size.

Remaining capacity: The remaining capacity of the destination media (DVD/SD) will be displayed.

List display: 8 recorded images matched to the set conditions will be displayed in reverse chronological order from the top. The following information of recorded images will be displayed.
Time and date when images were recorded, camera channel, event and hard disk drive number

Time range of the listed data: Displays a time and date range of the listed data.

Number of the listed data (Total): Displays the total number of listed copied data. When more than 10 000 data matched, the ">10000" indication will be displayed.

[Prev page] button: Displays the previous page.

[Next page] button: Displays the next page.

Note:

- When the shuttle ring (outside) is rotated, the previous/next page of the list will be displayed.

Step 5

After checking the size of the data to be copied and the remaining capacity, press the [SET] button after moving the cursor onto the [Copy] button.

→ The copy data list window will close. Copying will start and the [COPY] icon will be displayed on the task bar on monitor 2. When copying is complete, the [COPY] icon will disappear.

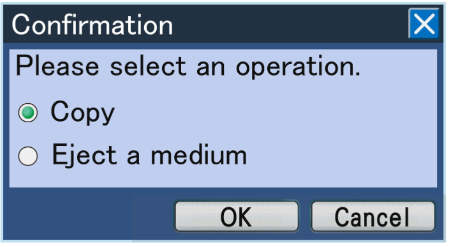
Important:

- Do not remove the SDHC/SD memory card during copying data onto the SDHC/SD memory card. It may damage data on the SDHC/SD memory card.
- In the following cases, copying will not start even when the [SET] button is pressed after moving the cursor onto the [Copy] button.
  - When the end time is set earlier than the start time
- Copying will be performed even when the remaining capacity of the destination media is not enough for copying.
- When pressing the [COPY] button on the front panel during copying, the confirmation window for cancellation of the current copying will be displayed. It is possible to cancel the current copying on this window. Copying continues even during the confirmation window is being displayed. When the power of the recorder is turned off during copying, the media used for copying may become unusable.

Step 6

When copying on a DVD, it is necessary to complete copying by removing the DVD. (When copying on an SDHC/SD memory card, it is unnecessary to take the following procedures to complete copying.)

When the [Copy] button on the front panel is pressed, the "Eject media" menu will be displayed. Select "Eject media", and then press the [SET] button.



Confirmation

Please select an operation.

● Copy

○ Eject a medium

→ The copy completion process will start. When the copy completion process ended, the completion notification window will be displayed and the DVD will become ready to remove.

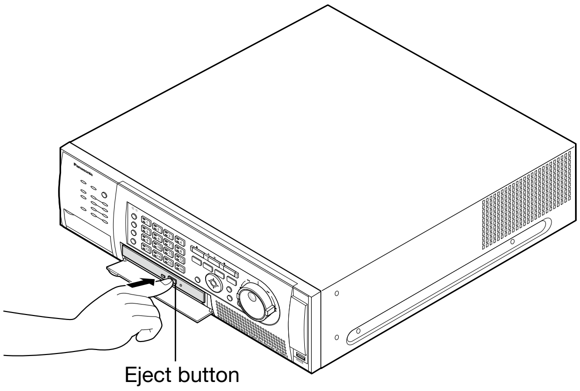
Note:

- It is impossible to play copied data if the copied data is finalized by the copy completion process even when copying onto a DVD is complete.
- It is also possible to remove the DVD in the following procedures.
  - Move the cursor onto the [Search & Copy] button of the submenu.

    → The menu list will be displayed.
  - Move the cursor onto "Eject media" on the displayed menu list, and then press the [SET] button.

Step 7

The DVD can be removed when the tray lock is released by pressing the button at the center of the DVD drive.



Important:

- Once a DVD is used for copying and removed from the recorder, it is impossible to copy another data on it.

Note:

- The tray will not come out even when the eject button is pressed if the operation described in step 6 is not performed to complete copying.

Operation and configuration when connecting the recorders in cascading connection

When connecting the recorders (up to 5 recorders) in cascading connection, all images managed by the connected recorders can be monitored on a single monitor.
The following are descriptions of how to operate when the recorders are connected in cascading connection. To operate the recorders connected in cascading connection, it is necessary to configure the settings in advance. Refer to the Installation Guide for further information.

Important:
- Audio cables can also be connected in cascading connection.

Configuration

Configure the settings required for cascading connection. Operations and settings of the WJ-HD716K are the same as that of the WJ-HD616K.

For WJ-HD616K

Select "On" for "Cascade" on the "Cascade" tab under "Display" of the setup menu of the recorder to be connected in cascading connection. Set the unit addresses of recorders as follows.

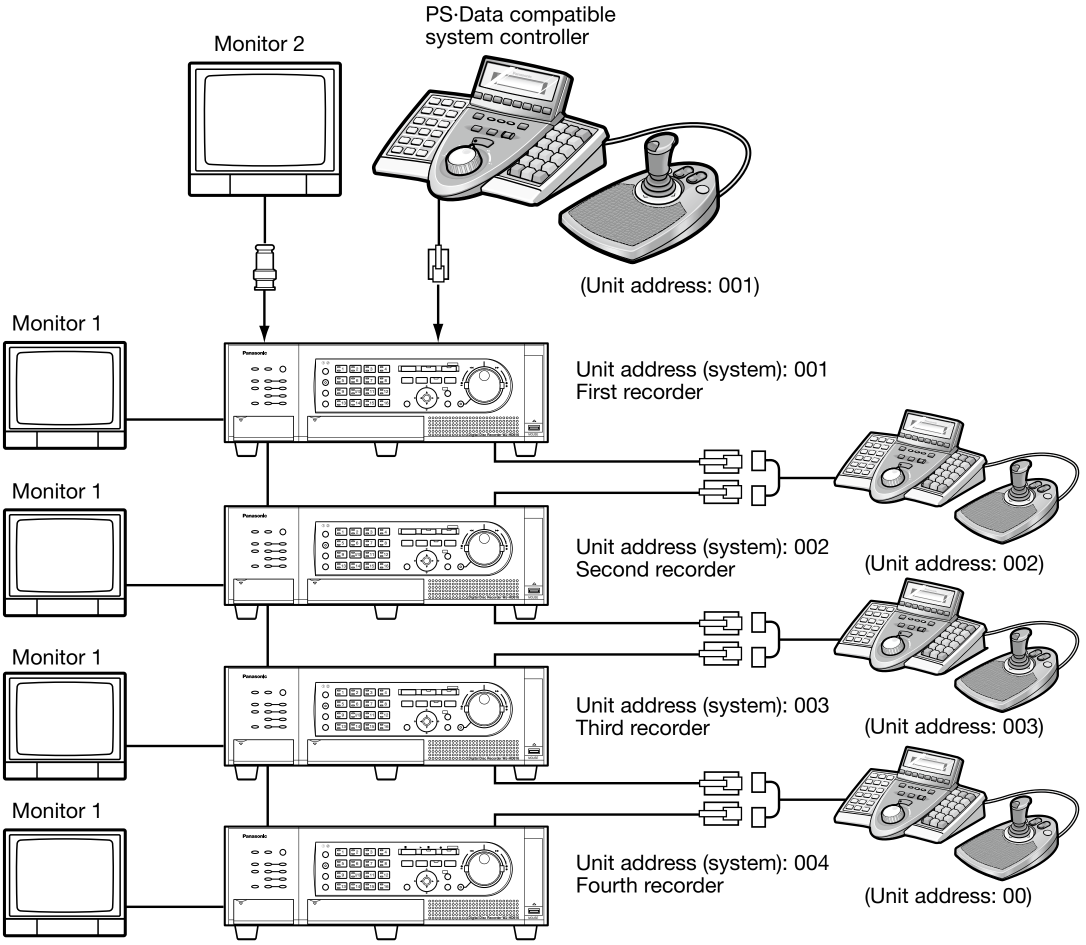
WJ-HD616K	Unit address (system)	Unit address (controller)
First recorder	001	Select a number except 001 - 004 and not used for the other devices.
Second recorder	002	
Third recorder	003	
Fourth recorder	004	
Fifth recorder	005	

Settings of a system controller

Set the unit addresses of system controllers as follows.

System controller	Unit address	Remarks
First system controller	001	It is possible to operate all monitor 1 and monitor 2 connected to the first through fifth WJ-HD616K.
Second system controller	002	Monitor 1 and monitor 2 connected to the first through the fifth WJ-HD616K are available to operate. However, camera selection on monitor 2 is unavailable.
Third system controller	003	
Fourth system controller	004	

Example of video output (analog) connection


PS·Data compatible system controller
Monitor 2
(Unit address: 001)
Monitor 1
Unit address (system): 001
First recorder
Monitor 1
Unit address (system): 002
Second recorder
(Unit address: 002)
Monitor 1
Unit address (system): 003
Third recorder
(Unit address: 003)
Monitor 1
Unit address (system): 004
Fourth recorder
(Unit address: 00)

* Do not assign unit address numbers (controller) 001 - 004 and also numbers used for the other devices to each the WJ-HD616K.

Operation using the buttons on the front panel

It is possible to operate using the buttons on the front panel. When selecting monitor 2, images will be displayed on monitor 2 connected to the first WJ-HD616K. When selecting monitor 1, images will be displayed on monitor 1 connected to the WJ-HD616K currently being operated.
Only the WJ-HD616K currently being operated is subject to operation. It is impossible to operate the other WJ-HD616K using the buttons on another WJ-HD616K.

Operate using the system controller

- When using the system controller whose unit address is 001
  It is possible to operate all the WJ-HD616K/WJ-HD716K in cascading connection by designating the unit number from a PS·Data compatible system controller.
  Refer to the operating instructions of the system controller for how to control it in the PS·Data mode.
- When using the system controller whose unit address is 002 - 004
  It is possible to operate all the WJ-HD616K/WJ-HD716K using the PS·Data compatible system controller.
  However, camera selection on monitor 2 is unavailable.

Operate the camera

It is possible to operate the following camera operations when displaying live images from a camera with the panning/tilting and zooming function.

• Panning/Tilting	Adjust the horizontal/vertical position of images from the camera
• Zoom	Zoom in/out images from the camera
• Focus	Adjust the focus of the camera
• Iris	Adjust the lens iris of the camera
• Preset position function	Register preset positions and move the camera direction to the registered preset positio.
• Auto function	Activate the auto function of the camera according to the settings of the camera

Note:

- The camera operation can be performed only when displaying images on a 1-screen on monitor 1.
- Depending on the model of the camera, some operations may not work.
- When a user with a higher user priority is operating at the same time, it may be impossible to operate the camera. In this case, the indication "BUSY" will be displayed on the operation panel. Refer to the Installation Guide for further information about the priority.
- Refer to page 70 for how to display the setup page of the camera and configure the settings of the camera.

Display the camera control panel

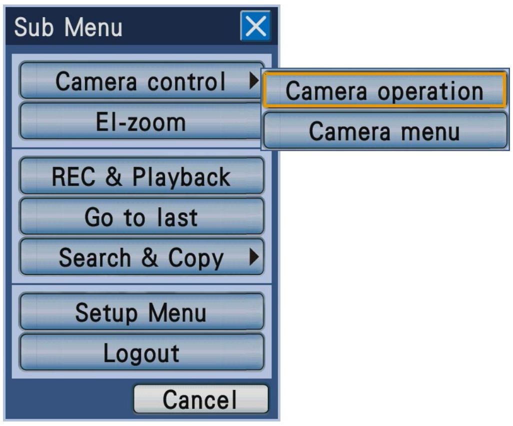
The panning/tilting, zooming, focus adjustment and iris adjustment can be made on the camera control panel.

Step 1

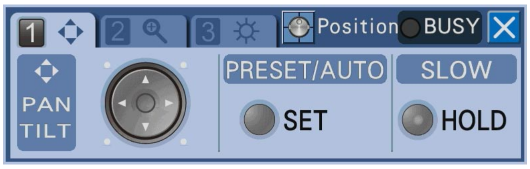
Press the [SUB MENU] button on the front panel.
→ The submenu window will be displayed.

Step 2

Move the cursor onto the [Camera control] button of the submenu, and then press the [SET] button.
→ The menu list will be displayed. Move the cursor onto "Camera operation" on the displayed menu list, and then press the [SET] button.



→ The [Pan/Tilt] tab of the camera control panel will be displayed.

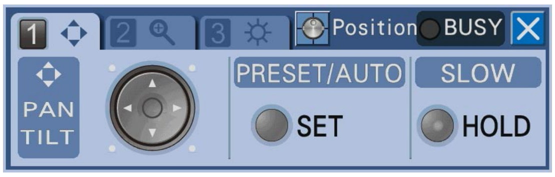


Panning/Tilting

Adjust the horizontal/vertical position of images from the camera.

Step 1

Display the camera control panel. (☞ Page 64)



Step 2

Adjust the horizontal/vertical position of images from the camera using the arrows button (▼, ▲, ◄, ►). The camera direction will move to the direction commanded by the arrows button.

Note:

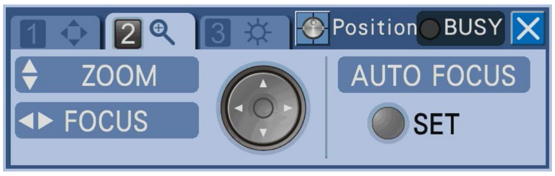
- It is possible to make the panning/tilting speed slower by adjusting the camera direction when the [HOLD] button is being lit (by pressing the [HOLD] button).
- To release the hold, press the [HOLD] button again.

Zooming

Zoom in/out images from the camera. Depending on the models of the connected cameras, the available zooming factors may be different.
Refer to the operating instructions of the camera for further information.

Step 1

Display the camera control panel (☞ page 64), and then press the camera selection button [2] on the front panel.
→ The [Zoom] tab will be displayed.



Step 2

Press the arrows button (▼ ▲). When pressing ▼, the displayed image will be zoomed out. When pressing ▲, the displayed image will be zoomed in.

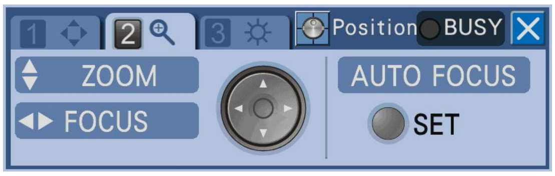
Focus adjustment

Adjust the focus of the camera. The auto focus function is available.

Step 1

Display the camera control panel (☞ page 64), and then press the camera selection button [2] on the front panel.

→ The [Focus] tab will be displayed.



Step 2

Press the arrows button (◄ ►). When pressing ◄, the focal point will move to the near side. When pressing ◄, the focal point will move to the far side. It is possible to automatically adjust the focus by pressing the [SET] button on the front panel.

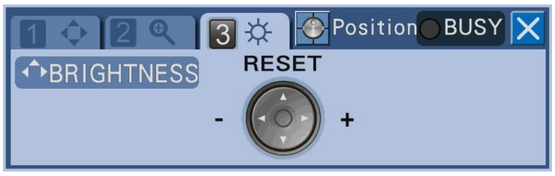
Iris adjustment

Adjust the lens iris of the camera

Step 1

Display the camera control panel (☞ page 64), and then press the camera selection button [3] on the front panel.

→ The [Iris] tab will be displayed.



Step 2

Press the arrows button (◄ ►). When pressing ◄, the iris will be closed and images will become darker. When pressing ►, the iris will open and images will become brighter. It is possible to reset the adjusted iris to the default by pressing the arrows button (▲).

Preset position function

Move the camera to the preset position registered in advance. It is necessary in advance to register preset positions to perform the preset position function.

Registration of preset positions

Register the preset positions for the camera. Up to 256 preset positions can be registered. The maximum number of preset position registration varies depending on the model of the camera.

Note:

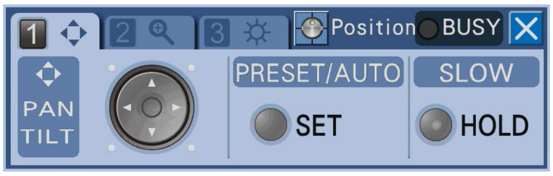
- Only users whose user level is allowed to control cameras or to configure the settings can register the preset positions.

Step 1

Move the camera direction to a position to be registered as a preset position.

Step 2

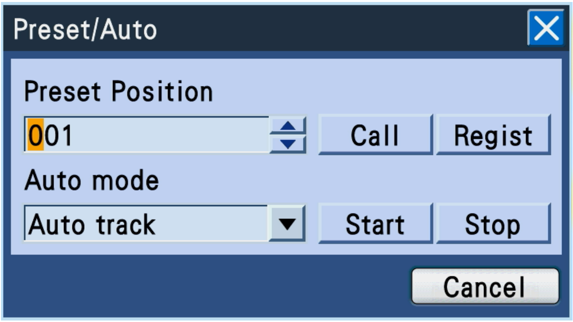
Display the [Pan/Tilt] tab of the camera control panel (☞ page 65)



Step 3

Press the [SET] button on the front panel.

→ The "Preset/Auto" window will be displayed.



Preset Position: 001

Auto mode: Auto track

Step 4

Enter a preset position number to be registered.

To enter the preset position number, press the camera selection button (1 - 0/10) or rotate the jog dial (inside).

Step 5

Move the cursor onto the [Regist] button, and then press the [SET] button.

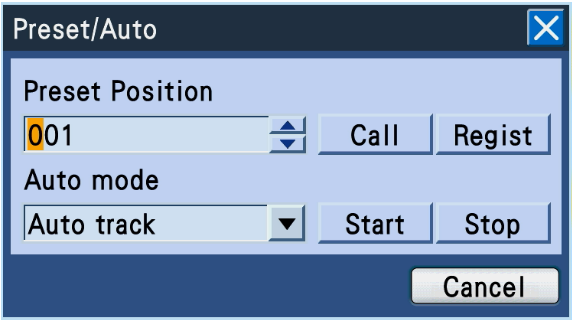
→ The confirmation window will be displayed. When the [OK] button on the confirmation window is selected, the "Preset/Auto" window will close and the camera direction checked by the images currently being displayed will be registered as a preset position.

Move a camera to the preset position

Move the camera to the preset position registered in advance.

Step 1

Display the "Preset/Auto" window. (☞ Page 67)



Step 2

Enter the preset position number to move the camera direction.
The preset position number can be entered in the same manner as of the preset number registration (☞ page 67).
When entering number "000", the camera direction will move to the home position.

Note:

- It is necessary to register the "Home" position by configuring the settings of the camera in advance.

Step 3

Move the cursor onto the [Call] button, and then press the [SET] button.
→ The camera direction will move to the preset position corresponding to the entered preset position number.

Step 4

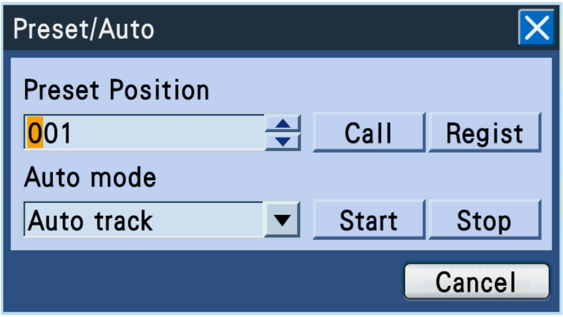
To close the "Preset/Auto" window, press the [SET] button after moving the cursor onto the [Cancel] button or press the [SETUP/ESC] button on the front panel.

Auto functions (Auto panning, etc.)

Activate the auto function of the camera according to the settings of the camera.

Step 1

Display the "Preset/Auto" window. (☞ Page 67)



Step 2

Move the cursor onto "Auto mode", and then select the desired auto function by rotating the jog dial (inside).
The following 8 auto functions can be selected.
Auto track, auto pan, preset sequence, sort, patrol 1, patrol 2, patrol 3, patrol 4
Refer to the operating instructions of the camera for information about each auto function.

Step 3

Move the cursor onto the [Start] button, and then press the [SET] button.

→ The "Preset/Auto" window will close and the selected auto function will start.

Step 4

To stop the selected auto function, press the [SET] button after moving the cursor onto the [Stop] button.

Step 5

To close the "Preset/Auto" window, press the [SET] button after moving the cursor onto the [Cancel] button or press the [SETUP/ESC] button on the front panel.

Operate the setup menu of the camera

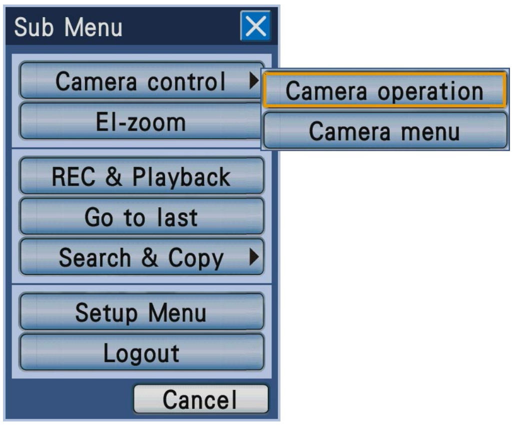
To control the camera connected to the recorder, it is necessary in advance to configure the settings of the camera function. The settings of the camera function can be configured on the setup menu of the camera.
It is possible to call the setup menu of the camera from the submenu. The contents of the setup menu and the operation procedures vary depending on the model of the camera. Refer to the operating instructions of the camera for further information.
The following are descriptions of how to display the setup menu of the camera and of how to perform the basic operation.

Step 1

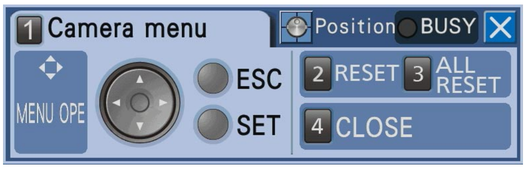
Press the [SUB MENU] button.
→ The submenu window will be displayed.

Step 2

Move the cursor onto the [Camera control] button of the submenu, and then press the [SET] button.
→ The menu list will be displayed. Move the cursor onto "Camera menu" on the displayed menu list, and then press the [SET] button.



→ The camera menu will be displayed and the camera setup menu will be displayed on the monitor.



Note:
- The status bar will be hidden while the camera menu panel is being displayed.

Step 3

Operate the setup menu of the camera using the camera menu panel.
To operate the setup menu of the camera, use the following buttons.

Move the cursor	Arrows button (▼ ▲ ◄ ►)
Change parameters	Arrows button (◄ ►)
Apply the set value or move to the lower level menu	[SET] button
Move to the higher level menu	[SETUP/ESC] button
Display the special menu	Move the cursor onto "SPECIAL" on the setup menu of the camera, and then press the camera selection button [2].
Reset the camera	Move the cursor onto "CAMERA RESET" on the setup menu of the camera, and then press the camera selection button [3].

Step 4

To close the setup menu of the camera, press the camera selection button [4].

Note:
- When the camera has the refresh function (REFRESH), it is possible to execute the refresh function by selecting the [2] button on the camera menu panel.
- The camera menu panel may sometimes remain displayed after the setup menu of the camera is closed such as when resetting the camera, etc. In this case, select the [4] button on the camera menu panel.
- Only users whose user level is allowed to control cameras or to configure the settings can configure the settings of the camera.

Disk management

On the [Disk] tab of "Maintenance" of the setup menu, it is possible to perform operation relating to the hard disk drives in the recorder or in an optional extension unit and SDHC/SD memory card.
The following are descriptions of how to delete images recorded on the hard disk drives and of how to format (initialize) an SDHC/SD memory card.

Delete images recorded on the hard disk drives manually

The following are descriptions of how to manually delete images recorded in the normal recording area and the event recording area on the hard disk drives in the recorder.
By designating a time and date, all the images recorded until the day before the designated time and date will be deleted. It is useful to delete unnecessary images.

Important:

- Note that the deleted images cannot be recovered and the remaining disk capacity will not increase even though deletion is performed.

Note:

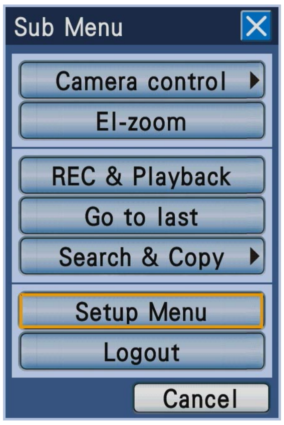
- It is possible to delete recorded images automatically when the set days have passed from the day the image was recorded (HDD auto deletion). Refer to the Installation Guide for further information.

Step 1

Press the [SUB MENU] button.
→ The submenu window will be displayed.

Step 2

Move the cursor onto the [Setup Menu] button, and then press the [SET] button.



→ The setup menu will be displayed.

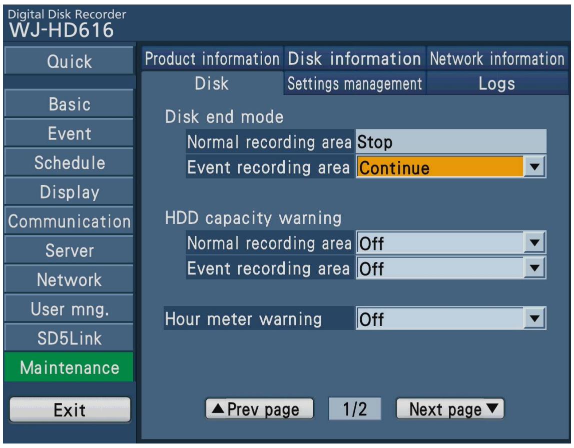
Step 3

Move the cursor onto "Maintenance", and then press the [SET] button.
→ The [Product information] tab of "Maintenance" of the setup menu will be displayed.

Step 4

Move the cursor onto "Disk", and then press the [SET] button.

→ The [Disk] tab will be displayed.


Digital Disk Recorder
WJ-HD616
Quick
Basic
Event
Schedule
Display
Communication
Server
Network
User mng.
SD5Link
Maintenance
Exit
Product information
Disk information
Network information
Disk
Settings management
Logs
▲Prev page
1/2
Next page▼

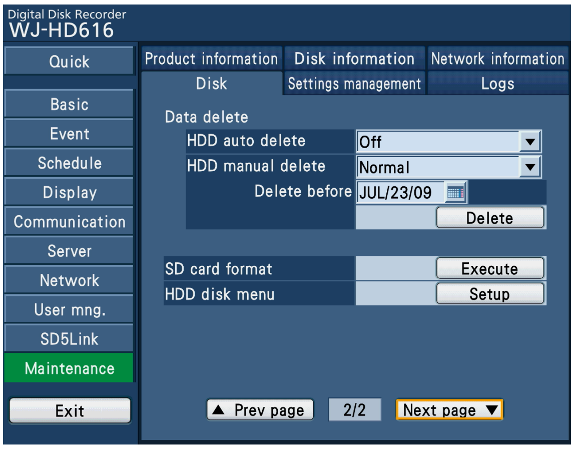
Disk end mode
Normal recording area: Stop
Event recording area: Continue

HDD capacity warning
Normal recording area: Off
Event recording area: Off

Hour meter warning: Off

Step 5

Move the cursor onto [Next page ▼], and then press the [SET] button to display the next page.
Select the recording area on which data to be deleted from "Normal recording area" or "Event recording area", and then set the date by rotating the jog dial (inside). Images recorded until the day before the set date are subject to deletion.


Digital Disk Recorder
WJ-HD616
Quick
Basic
Event
Schedule
Display
Communication
Server
Network
User mng.
SD5Link
Maintenance
Exit
Product information
Disk information
Network information
Disk
Settings management
Logs
Delete
Execute
Setup
▲ Prev page
2/2
Next page ▼

Data delete
HDD auto delete: Off
HDD manual delete: Normal
Delete before: JUL/23/09

SD card format
HDD disk menu

Step 6

Move the cursor onto the [Delete] button, and then press the [SET] button.

→ The confirmation window will be displayed.

Step 7

Move the cursor onto [OK], and then press the [SET] button.

→ Images recorded until the day before the set date will be deleted.

Format (initialize) an SDHC/SD memory card

To copy recorded images onto an SDHC/SD memory card, it is necessary in advance to insert an SDHC/SD memory card into the card slot of the recorder and format it. To delete recorded images on the SDHC/SD memory card, format the SDHC/SD memory card again.

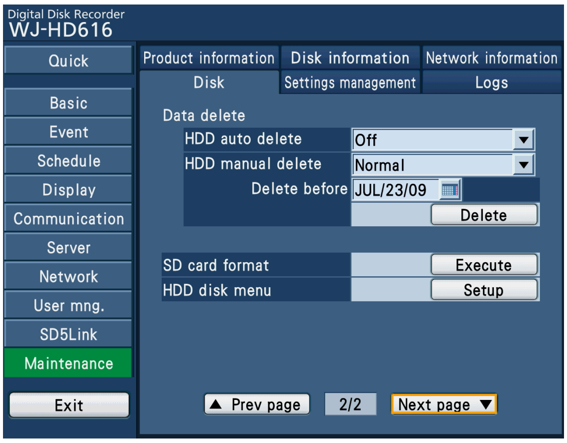
Important:
- When an SDHC/SD memory card is formatted, all recorded images and setup data on the SDHC/SD memory card will be deleted. It is impossible to recover the deleted images and setup data.
- It is impossible to copy record images onto an SDHC/SD memory card formatted on a PC. Format the SDHC/SD memory card on the recorder.

Step 1

Display the [Disk] tab. (☞ Pages 71 - 72)

Step 2

Move the cursor onto the [Execute] button of "SD card format", and then press the [SET] button.

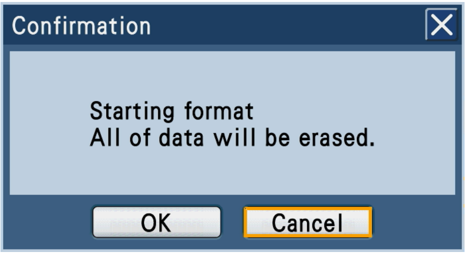

Digital Disk Recorder
WJ-HD616
Quick
Basic
Event
Schedule
Display
Communication
Server
Network
User mng.
SD5Link
Maintenance
Exit
Product information
Disk information
Network information
Disk
Settings management
Logs
Delete
Execute
Setup
▲ Prev page
2/2
Next page ▼

Data delete
HDD auto delete: Off
HDD manual delete: Normal
Delete before: JUL/23/09
SD card format
HDD disk menu

→ The confirmation window will be displayed.

Step 3

Move the cursor onto [OK], and then press the [SET] button.


Confirmation
OK
Cancel

Starting format
All of data will be erased.

→ Formatting of the SDHC/SD memory card will start and the format progress window will be displayed. When completing the format, the format completion window will be displayed.

Important:
- Do not turn off the power of the recorder in the process of formatting.

Configure the network settings

From this page to the "Disk management" chapter (☞ page 121), the instructions of how to operate the recorder using a web browser are provided.

When operating the recorder using a web browser, it is necessary in advance to configure the network settings of the recorder and a PC.

When the network settings of the PC are as follows, it is unnecessary to configure the settings. It is possible to configure the settings and operate the recorder using a web browser after completing the connection.

IP address: 192.168.0.2 – 192.168.0.249, 192.168.0.251 – 192.168.0.254

Subnet mask: 255.255.255.0

Default gateway: 192.168.0.1

When the settings are configured differently from the above, configure the network settings of the recorder or a PC.

Configure the network settings of the recorder

To conform the settings of the recorder to the environment of PC’s, configure the settings using the buttons on the front panel of the recorder.

Refer to the chapter relating to the [Basic] tab of "Network" of the setup menu for how to operate (☞ Installation Guide).

Configure the network settings of the PC

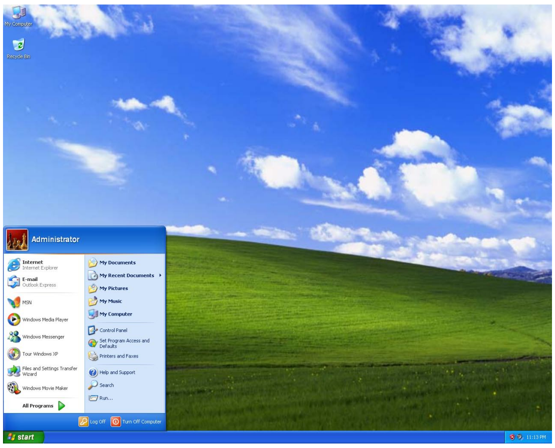
The TCP/IP setting of the PC shall be changed to conform to the settings of the recorder.

When using the recorder with the default (IP address: 192.168.0.250), set the IP address of the PC to "192.168.1.xxx (a number from 2 to 254 except 250)".

In these operating instructions, the settings are performed on Windows XP as examples. Refer to the operating instructions of the respective OS for further information.

Step 1

Click "Start" on the task bar, and then click "Control Panel".

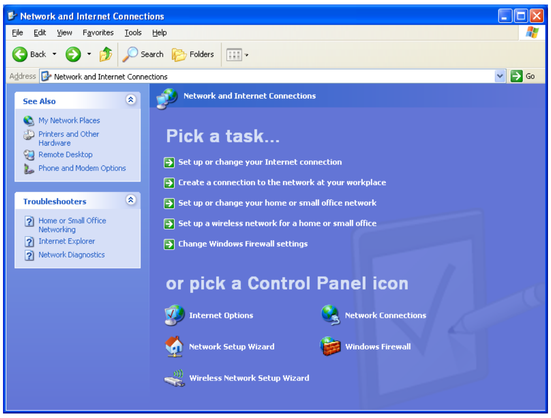

Administrator
Internet
Internet Explorer
E-mail
Outlook Express
MSN
Windows Media Player
Windows Messenger
Tour Windows XP
Files and Settings Transfer Wizard
Windows Movie Maker
All Programs
My Documents
My Recent Documents
My Pictures
My Music
My Computer
Control Panel
Set Program Access and Defaults
Printers and Faxes
Help and Support
Search
Run...
Log Off
Turn Off Computer
start

→ The control panel will be displayed.

Important:
- Log in to the PC as an administrator.

Step 2

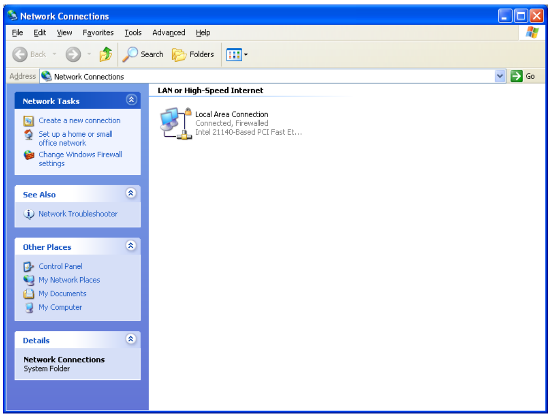
Click the "Network and Internet Connections" icon.


Network and Internet Connections
File
Edit
View
Favorites
Tools
Help
Back
Search
Folders
Address
Network and Internet Connections
Go
See Also
My Network Places
Printers and Other Hardware
Remote Desktop
Phone and Modem Options
Troubleshooters
Home or Small Office Networking
Internet Explorer
Network Diagnostics
Network and Internet Connections
Pick a task...
Set up or change your Internet connection
Create a connection to the network at your workplace
Set up or change your home or small office network
Set up a wireless network for a home or small office
Change Windows Firewall settings
or pick a Control Panel icon
Internet Options
Network Connections
Network Setup Wizard
Windows Firewall
Wireless Network Setup Wizard

→ The "Network and Internet Connections" window will be displayed.

Step 3

Click "Network Connections".

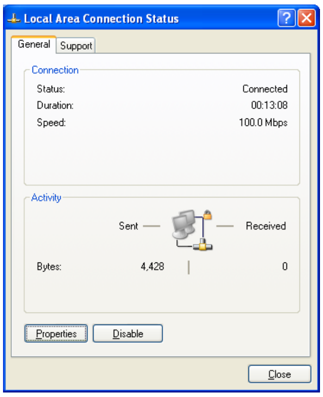

Network Connections
File Edit View Favorites Tools Advanced Help
Back
Search
Folders
Address
Network Connections
Go
Network Tasks
Create a new connection
Set up a home or small office network
Change Windows Firewall settings
See Also
Network Troubleshooter
Other Places
Control Panel
My Network Places
My Documents
My Computer
Details
Network Connections
System Folder
LAN or High-Speed Internet

Local Area Connection
Connected, Firewalled
Intel 21140-Based PCI Fast Et...

→ The "Network Connections" window will be displayed.

Step 4

Double-click "Local Area Connection".

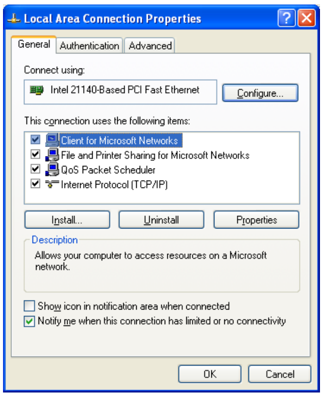

Local Area Connection Status
General
Support
Connection
Activity
Sent
Received
Properties
Disable
Close

Status: Connected
Duration: 00:13:08
Speed: 100.0 Mbps
Bytes: 4,428 | 0

→ The "Local Area Connection Properties" window will be displayed.

Step 5

Click "Properties".


Local Area Connection Properties
General
Authentication
Advanced
Connect using:
Configure...
This connection uses the following items:
Install...
Uninstall
Properties
Description
OK
Cancel

Intel 21140-Based PCI Fast Ethernet

☑ Client for Microsoft Networks
☑ File and Printer Sharing for Microsoft Networks
☑ QoS Packet Scheduler
☑ Internet Protocol (TCP/IP)

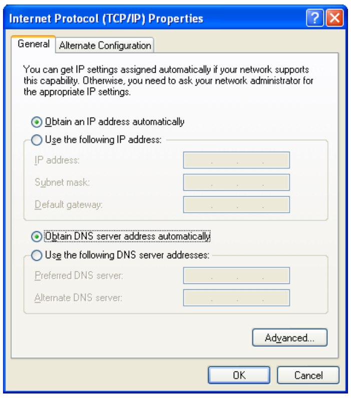
Allows your computer to access resources on a Microsoft network.

☐ Show icon in notification area when connected
☑ Notify me when this connection has limited or no connectivity

→ The "Local Area Connection Properties" window will be displayed.

Step 6

Click "Internet Protocol (TCP/IP)", and then click "Properties".


Internet Protocol (TCP/IP) Properties
General
Alternate Configuration
IP address:
Subnet mask:
Default gateway:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

● Obtain an IP address automatically
○ Use the following IP address:

● Obtain DNS server address automatically
○ Use the following DNS server addresses:

→ The "Properties" window of "Internet Protocol (TCP/IP)" will be displayed.

Step 7

Click "Use the following IP address" and enter the IP address and the subnet mask as follows.

- IP address: 192.168.0.9
- Subnet mask: 255.255.255.0

Depending on the network configuration, it is necessary to configure the default gateway. Refer to a system administrator for further information about the settings.

Step 8

Click the [OK] button and close the window.

Network security of the recorder

The security function of the recorder

① Access restriction by the user authentication and the host authentication
It is possible to restrict users to access the recorder by selecting "On" for "User authentication/Host authentication". (☞ Installation Guide)

② Access restriction by changing the HTTP port number
By changing the HTTP port number, it is possible to prevent illegal access such as a port scanning, etc. (☞ Installation Guide)

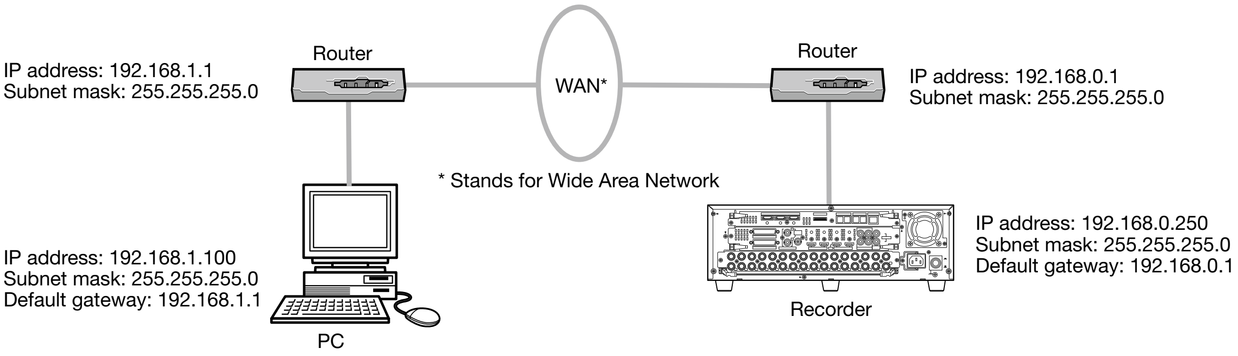
To enhance the network security

It is possible to enhance the network security by dividing the subnet using a router to authenticate users twice (by the recorder and by the router). When connecting the recorder to an unsecured network, secure the network connection by installing a VPN (Virtual Private Network) device, etc. between the recorder and the host PC.

Important:

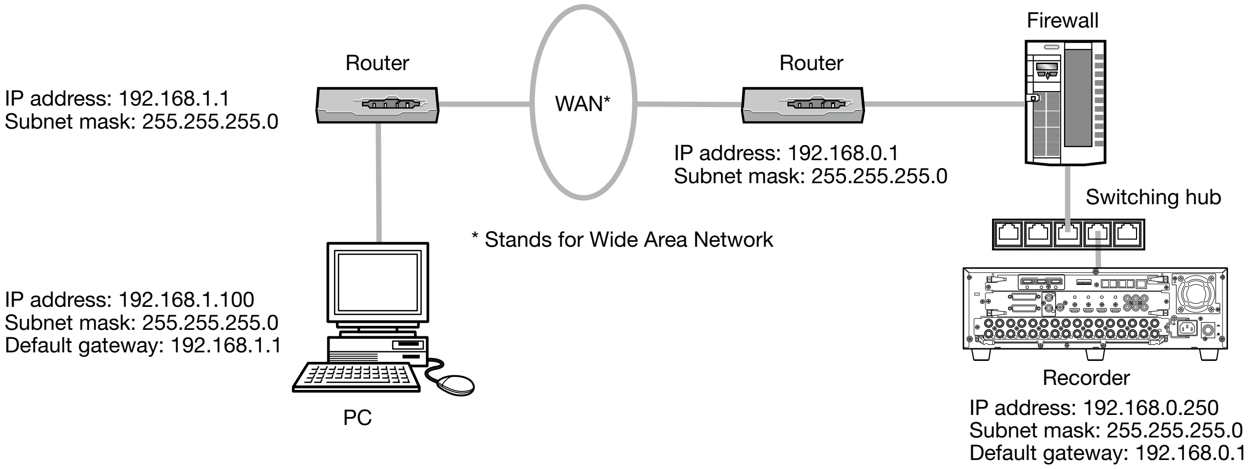
- The settings for the network security varies depending on the network to which the recorder is to be connected such as an intranet or Internet service provider. Refer to a network administrator for further information about the network security.

[Connection example]


IP address: 192.168.1.1
Subnet mask: 255.255.255.0
Router
WAN*
Router
IP address: 192.168.0.1
Subnet mask: 255.255.255.0
* Stands for Wide Area Network
IP address: 192.168.0.250
Subnet mask: 255.255.255.0
Default gateway: 192.168.0.1
IP address: 192.168.1.100
Subnet mask: 255.255.255.0
Default gateway: 192.168.1.1
Recorder
PC

By using a firewall, etc., it is possible to use packet filtering and protocol filtering to enhance the network security.

[Connection example]


Firewall
Router
Router
IP address: 192.168.1.1
Subnet mask: 255.255.255.0
WAN*
IP address: 192.168.0.1
Subnet mask: 255.255.255.0
Switching hub
* Stands for Wide Area Network
IP address: 192.168.1.100
Subnet mask: 255.255.255.0
Default gateway: 192.168.1.1
Recorder
PC
IP address: 192.168.0.250
Subnet mask: 255.255.255.0
Default gateway: 192.168.0.1

Display the operation window

Boot the PC and operate the recorder using a web browser.

Step 1

Start the web browser.

Step 2

Enter the IP address or URL assigned to the recorder into the [Address] box, and then press the [Enter] key.

→ The authentication window will be displayed. The authentication window will not be displayed when "Off" is selected fro "User authentication" on the [Basic] tab of "User mng." of the setup menu.

Important:

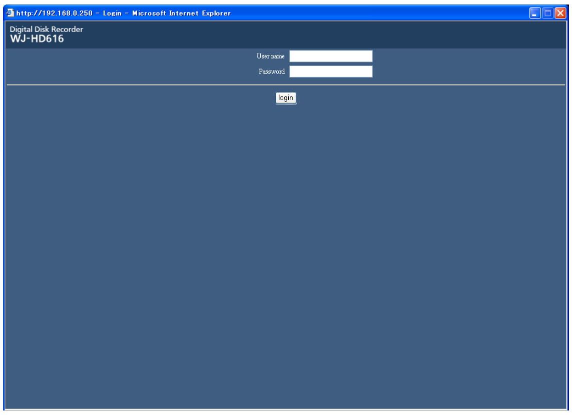
- Refer to a system administrator for further information about the set IP address.
- It is impossible to access the recorder from a PC whose IP address is not registered in the recorder when "On" is selected for "Host authentication" on the [Basic] tab of "User mng." of the setup menu. Refer to a system administrator for further information.
- Do not attach "0" before the numbers when entering IP address.
  Example: ○ 192.168.0.50
  X 192.168.0.050
- If a message is displayed on the information bar, see page 127.

Note:

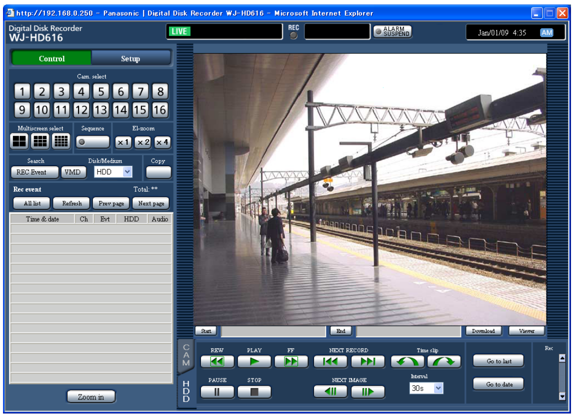
- When displaying the top page of the operation window of the recorder on a PC for the first time, the wizard for ActiveX installation required to display images from cameras will be displayed. Follow the instructions of the wizard to complete the installation.
- When any ActiveX for Panasonic's digital disk recorder other than this product is already installed, uninstall "WebVideo ActiveX" from "Add or Remove Programs" in "Control Panel" and then install ActiveX for this product.
- When the installation wizard is displayed each time displaying other page even though installation of ActiveX for this product has been completed, reboot the PC.

Step 3

Enter the user name and password registered in the recorder, and then click the [Login] button.


http://192.168.0.250 - Login - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
User name
Password
login

→ The top page will be displayed.

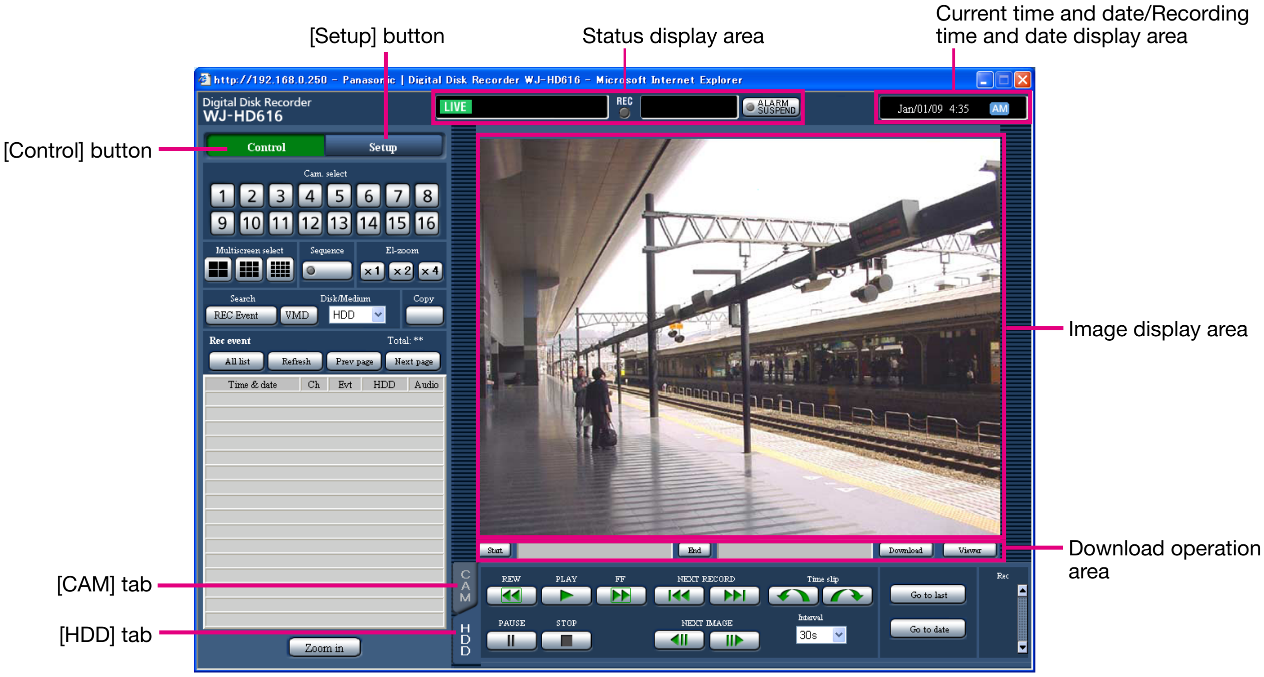

http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
Jan/01/09 4:35
AM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

Important:

- Refer to a system administrator for the set user name and password.
- Refer to the Installation Guide for how to register users.
- The default administrator name and password are as follows.
  Administrator name: ADMIN
  Password: 12345
- To enhance the security, change the administrator name and password before running the recorder. Change the password periodically.
  Refer to the Installation Guide for how to change the password.
- Refer to page 127 when a message is displayed on the information bar or when an unnecessary status bar or scroll bar is displayed on the pop-up window.

About the operation window

Top Page


[Setup] button
Status display area
Current time and date/Recording time and date display area
[Control] button
Image display area
Download operation area
[CAM] tab
[HDD] tab
http://192.168.0.250 – Panasonic | Digital Disk Recorder WJ-HD616 – Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
Jan/01/09 4:35
AM
Control
Setup
Cam. select
Multiscreen select
Sequence
El-zoom
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
REW
PLAY
FF
NEXT RECORD
Time slip
Go to last
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to date
Rec
CAM
HDD

[Control] button (☞ page 79)
It is possible to operate the switcher functions of the camera such as switching the camera channel to display live images from a different camera or start the sequence display using the operation panel displayed by clicking this button. The search result will also be displayed on this tab.

[Setup] button
Operation relating to the settings of the recorder can be performed using the operation panel displayed by clicking this button. Refer to Installation Guide for further information about the setup menu.

Status display area (☞ page 81)
The current status of the recorder such as playback status, recording status, etc. will be displayed.

Current time and date/Recording time and date display area
When displaying live images in the image display area, the current time and date will be displayed. When displaying recorded images, the recording time and date (when images were recorded) will be displayed.

Image display area
Live images or recorded images will be displayed. When configuring the settings, the setup menu will be displayed.

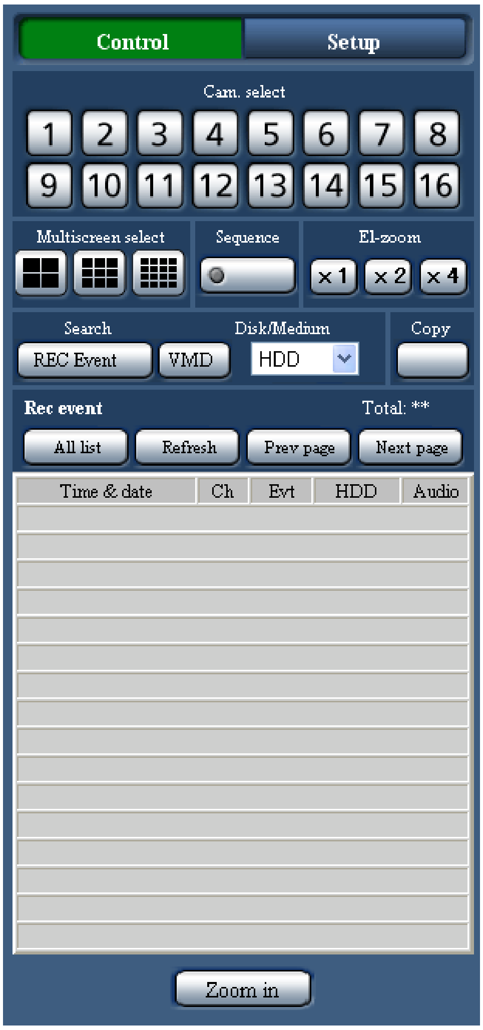
Download operation area (☞ page 82)
Downloading of recorded images or the viewer software can be made on this area.

[HDD] tab (☞ page 82)
Playback operation of recorded images can be made on this tab.

[CAM] tab (☞ page 83)
Camera control such as zooming, focus adjustment, auto panning, etc. can be made on this tab.

[Control] button

The following operation panels will be displayed when this button is clicked.



[Cam. select] box

Images from the selected camera channel will be displayed on a 1-screen in the image display area by clicking the button.

[Multiscreen select] box

Images from 4 - 16 cameras can be displayed simultaneously on a multi-screen.

4-screen button: Each time this button is clicked, images from different camera groups will be displayed on a 4-screen.

9-screen button: Each time this button is clicked, images from different camera groups will be displayed on a 9-screen.

16-screen button: Images from camera channels 1 - 16 will be displayed on a 16-screen.

[Sequence] box

Images from different cameras will sequentially be displayed according to the settings configured in advance by clicking the button. The indicator on the button will light green during the sequence display. (☞ Page 88)

[El-zoom] box

Images from the camera will be displayed at a scale corresponding to the clicked zoom factor button.

[x1] button: x1
[x2] button: x2
[x4] button: x4

[Search] box

Use this button to search recorded images.
When selecting "HDD" for "Disk/Media", the [Recording event] button and the [VMD] button will be displayed. The recording event list window or the VMD search list window will be displayed by clicking each button respectively.
When selecting "DVD" or "SD" for "Disk/Media", the [Copy data] button will be displayed. The copy data window will be displayed by clicking the [Copy data] button.
The search result will be displayed in list form at the bottom of the [Search] box.

[Copy] button

The copy data window will be displayed by clicking this button. Use this button to manually copy recorded images onto a DVD or an SDHC/SD memory card. (☞ Page 104)

Recording event list window

Number of the listed data: Total number of the listed data (recording event) will be displayed. When the total number of the listed data ismore than 10 000, the ">10000" indication will be displayed.

[All list] button: Cancels filtering and lists all recording events.

[Refresh] button: Updates the list to the latest one.

[Prev page] button: Displays the previous page of the list.

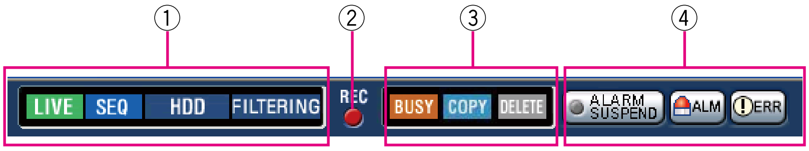
[Next page] button: Displays the next page of the list.

[Time & date]: Start time of recording will be displayed.

[Ch]: A camera channel used for recording will be displayed.
[Evt]: Event type will be displayed. (☞ Page 8)
[HDD]: The hard disk drive number in which the corresponding recorded images are stored will be displayed.
[Audio]: When audio is attached to recorded images, the audio icon will be displayed.

[Zoom in] button
Live images from the camera or recorded images will be enlarged by clicking this button.

Status display area



① **The status of image (live image/recorded image) display operation will be displayed.**

LIVE: Indicates that live images are being displayed.

▶: Indicates that playback images are being displayed.

◀: Indicates that reverse playback images are being displayed.

▶▶: Indicates that fast playback images are being displayed.

◀◀: Indicates that fast reverse playback images are being displayed.

II: Indicates that a paused image is being displayed.

DL: Indicates that recorded images/audio are being downloaded.

END: Indicates that downloading of recorded images/audio is completed.

[Step 1] - [Step 7]

: Indicates the playback speed.

Step 1: Normal playback speed (1x)
Step 2: Approx. 2x playback speed
Step 3: Approx. 5x playback speed
Step 4: Approx. 10x playback speed
Step 5: Approx. 20x playback speed
Step 6: Approx. 50x playback speed
Step 7: Approx. 100x playback speed

SEQ: Indicates that the sequence display is being performed.

HDD: Indicates the normal recording area or the event recording area on the hard disk drive.

DVD: Indicates that the DVD drive is being selected.

SD: Indicates that the SDHC/SD memory card is being selected.

RECOVER: Indicates that RAID recovery is being performed.

FILTERING: Indicates that a recording events are being filtered. Refer to page 93 for further information about filtering of recording events.

② **[REC] indicator**

Indicates the status of recording.

REC ●: Indicates that recording is being performed.

REC ●: Indicates that recording is not being performed.

③ **Indicates the following statuses:**

BUSY: Indicates that the camera is inoperable since a user with a higher priority is currently operating the camera.

COPY: Indicates that copying is being performed.

DELETE: Indicates that recorded images are being deleted.

④ **Indicates information about events and errors.**

[ALARM SUSPEND] button

ALARM SUSPEND: Clicking this button will disable the subsequent alarm actions (☞ page 102).

ALARM SUSPEND: Indicates that the alarm is being suspended.

[ALM] button

ALM: This button will be displayed when an event occurs. The alarm action will be canceled by clicking this button (☞ page 102).

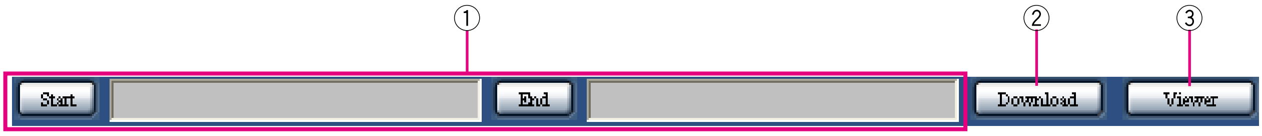
[ERR] button

ERR: Indicates an error occurrence. The error action will be canceled by clicking this button. Refer to pages 18 - 19 for further information about errors.

Note:

- The emergency recording will not stop by clicking the [ALM] button when the emergency recording is being performed. It will stop only when "Continue" is selected for "Recording duration" on the "Emergency rec." page.

Download operation area

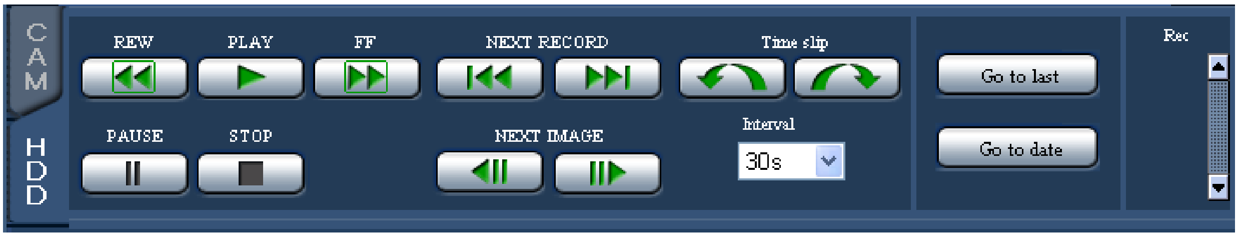


① **The start and end time and date of recorded images to be downloaded will be displayed. (☞ Page 106)**
[Start]: Designate the start time and date of recorded images to be downloaded.
[End]: Designate the end time and date of recorded images to be downloaded.

② **[Download] button**
Downloading of recorded images from the specified start and end time and date will start by clicking this button.

③ **[Viewer] button**
The viewer software will be downloaded by clicking this button. It is possible to play, save and print the downloaded images using the viewer software. (☞ Page 108)

[HDD] tab



[REW] button
Plays recorded images in reverse at high speed. Playback speed of fast reverse playback will change in the following order each time this button is clicked: Step1 (1x) → Step2 (Approx. 2x) → Step3 (Approx. 5x) → Step4 (Approx. 10x) → Step5 (Approx. 20x) → Step6 (Approx. 50x) → Step7 (Approx. 100x)

[PLAY] button
Plays recorded images.

[FF] button
Plays recorded images at high speed. Playback speed of fast playback will change in the following order each time this button is clicked: Step2 (Approx. 2x) → Step3 (Approx. 5x) → Step4 (Approx. 10x) → Step5 (Approx. 20x) → Step6 (Approx. 50x) → Step7 (Approx. 100x)

[NEXT RECORD] button
Skips to the next recorded image and plays it.

[PREV RECORD] button
Skips to the previous recorded image and plays it.

[Time slip] button
Jumps forward for a certain time and plays from the jumped point.

[Reverse time slip] button
Jumps backward for a certain time and plays from the jumped point.

Interval (Amount of time to be jumped)
Select the amount of time to be jumped from the following.
30 seconds, 1 minute, 5 minutes, 10 minutes, 30 minutes, 60 minutes

Note:
- The [Time slip] button and the [Reverse time slip] button will not work when they are clicked at the start point or the end point of recording data.

- When the [Time slip] button or the [Reverse time slip] button is clicked, the start point after the jump may sometimes be at a point several seconds later than the supposed point.

[PAUSE] button
Playback will be paused when this button is clicked during playback. Playback will resume when this button is clicked during pausing.

[STOP] button
Stops playback and displays live images.

[NEXT IMAGE] button
The next frame will be displayed when this button is clicked during pausing.

[PREV. IMAGE] button
The previous frame will be displayed when this button is clicked during pausing.

[Go to last] button:
Click this button to skip to a point that is the start time of the latest recorded image using the camera channel currently being displayed and start playback.

[Go to date] button:
The "Go to date" window will be displayed by clicking this button. It is possible to designate the desired time and date from when playback of recorded images is to start. (☞ Page 92)

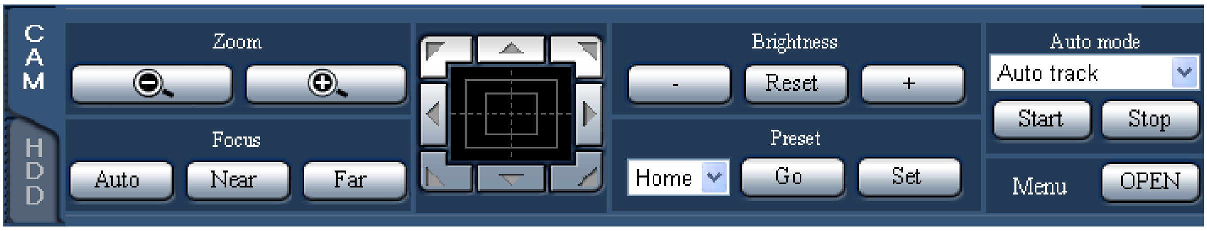
[Rec] box
The recording button and the recording stop button will be displayed when the ▲ button is clicked.
The recording button and the recording stop button will be hidden when the ▼ button is clicked.

● **(Recording button):** Starts manual recording.

🟨 **(Recording stop button):** Stops manual recording.

Note:
- To display the recording button and the recording stop button, hold down the ▲ button until they appear.

[CAM] tab



Zoom
Zooming can be adjusted by clicking the [–] button (wide) or the [+] button (tele).

Note:
- It is possible to adjust zooming using the mouse wheel.

Focus
Focusing can be adjusted by clicking the [Near] button or the [Far] button. The auto focus function can be performed by clicking the [Auto] button.

Control pad/buttons
Clicking the buttons around the control pad can move (pan/tilt) a camera in the clicked direction.
Clicking inside the control pad also can adjust the vertical/horizontal position (pan/tilt) of the displayed live images. Panning/tilting speed will become faster if a clicked point gets farther from the center point of the control pad.

Note:
- Clicking on the screen can move (pan/tilt) a camera to the clicked direction.

Brightness

The brightness (lens aperture) can be adjusted by clicking the [–] (darker) button or the [+] (brighter) button.

It is possible to reset the adjusted brightness by clicking the [Reset] button.

Preset

It is possible to register preset positions of the camera and to move the camera direction to the registered preset positions.

Select the preset position number from the following.

Home, 1 - 256

When the [Move] button is clicked, the camera direction will move to the preset position corresponding to the selected preset position number. When the [Register] button is clicked, the camera direction will be registered and assigned to the selected preset position number.

Note:

- It is impossible to register the position as "Home".
- Only users whose user level is allowed to register preset positions can register preset positions.
- Refer to the operating instructions of the camera for the available preset position numbers.

Auto mode

Select the auto mode from the following. Click the [Start] button to start the selected auto mode function. Click the [Stop] button to stop the auto mode function.

Auto track: The camera will automatically track an object moving on the screen.

Auto pan: The camera direction will automatically move (pan) between the start point and end point set in advance.

Preset sequence: The camera will move (pan) to the preset positions registered in advance in order of the preset position number (numerical order).

Sort: The camera will move (pan) counterclockwise to the preset positions registered in advance in order of the closest from the current position.

Patrol 1 - 4: The camera will trace the manually recorded panning pattern.

Note:

- Each function of the auto mode is available only for combination cameras. Refer to the operating instructions of the camera for further information about the auto mode function of the camera.

[Menu] box

When the [OPEN] button is clicked, the setup window of the camera will be displayed. Refer to page 118 for how to operate the setup window.

Monitor live images from cameras

Live images from cameras will be displayed in the image display area.
It is possible to display live images on a 1-screen or on a multiscreen. It is also possible to display live images from multiple cameras sequentially by switching the camera channels in order (sequence display).

Display images on a 1-screen

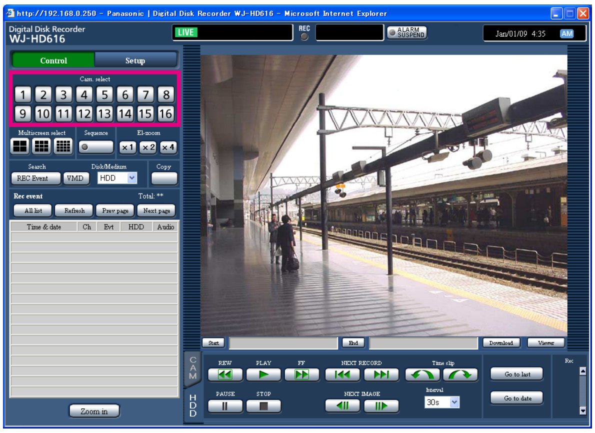
To display live images on a 1-screen, take the following procedures.

Step 1

Display the top page of the operation window.
(☞ Page 77)

Step 2

Select the camera channel from which images to be displayed.
Click the camera channel button in the [Cam. select] box.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
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ALARM SUSPEND
Jan/01/09 4:35
AM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
Go to last
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to date
Rec

→ Live images from the selected camera channel will be displayed.

Note:

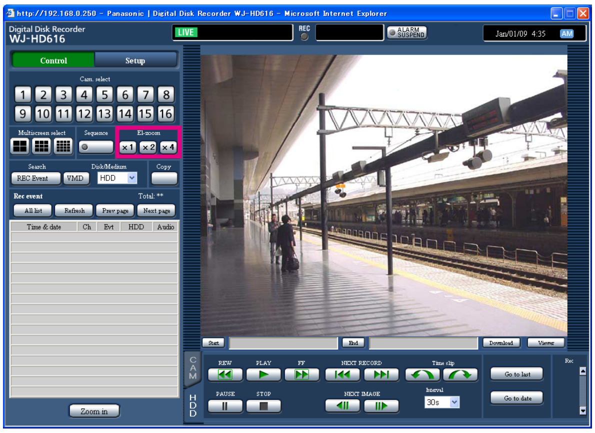
- Selecting a camera from the right-click pop-up menu will display images from the selected camera channel.
- When the image capture size of the current recording is changed during displaying live images, image refresh may sometimes stop for a moment (around a second).

Use the electronic zoom

When displaying live images on a 1-screen, it is possible to enlarge live images using the electronic zoom and to move the area of the enlarged image to be displayed.

Step 1

Click any of the [x1], [x2] and [x4] buttons to change the zoom factor of the electronic zoom.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
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Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
x1 x2 x4
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: **
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Prev page
Next page
Time & date
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HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

Note:

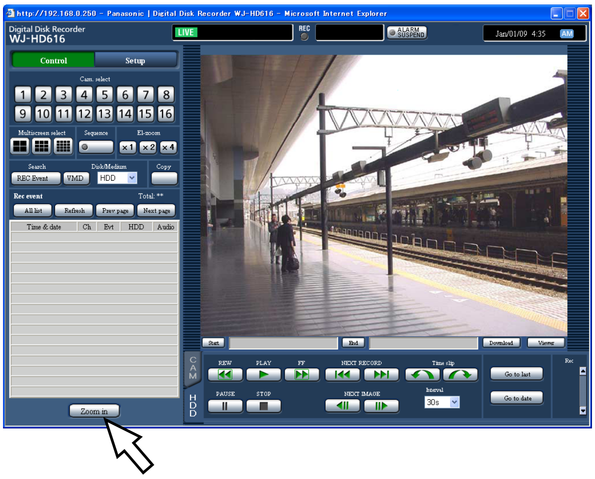
- Clicking a point in the zoomed image moves the zoomed image by positioning the clicked point as the center point.

Enlarge images

It is possible to enlarge live images.

Step 1

Click the [Zoom in] button.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
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9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
x1 x2 x4
Search
Disk/Medium
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REC Event
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HDD
Rec event
Total: **
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Prev page
Next page
Time & date
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Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

Note:

- It is also possible to enlarge images by selecting "ZOOM IN" from the menu displayed when right-clicking on images from the camera.
- To return the zoomed image to the original size, right-click on the zoomed image and select "BACK" from the displayed pop-up menu.

Display images on a multiscreen

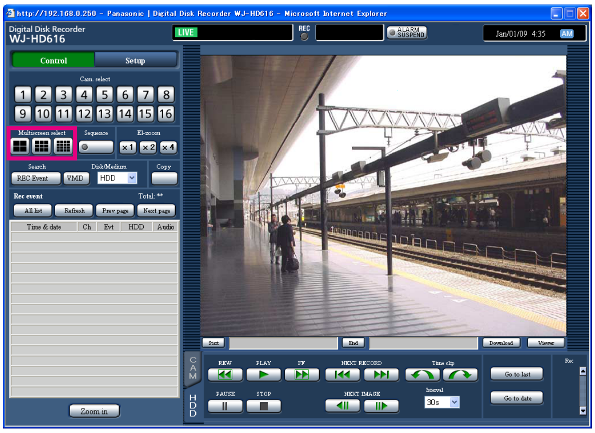
Live images from cameras can be displayed on a multiscreen (4-, 9-, 16-screen).

Step 1

Display the top page of the operation window.
(☞ Page 77)

Step 2

Click a multiscreen selection button in the [Multiscreen select] box.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
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Jan/01/09 4:35
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Cam. select
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9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
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HDD
Rec event
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Time & date
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HDD
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Zoom in
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End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
Go to last
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to date
Rec

⊞ (4-screen button)

Each time this button is clicked, images from different camera groups will be displayed on a 4-screen.

▦ (9-screen button)

Each time this button is clicked, images from different camera groups will be displayed on a 9-screen.

▦ (16-screen button)

Images from camera channels 1 - 16 will be displayed on a 16-screen.

→ Live images from cameras will be displayed on a multiscreen.

Step 3

To display images on a 1-screen again, click any of the camera channel buttons in the [Cam. select] box.

Note:

- It is also possible to display images from the cameras on a multiscreen by selecting "Multiscreen" from the menu displayed when right-clicking on images from the camera.
- To display image from the camera on a 1-screen again, right-click on the image and select a camera channel from the displayed pop-up menu.
- It is possible to display images from the desired camera on a 1-screen by clicking the respective camera title.
- When displaying images on a multiscreen, audio assigned to the camera channel from which images are displayed on the upper left corner will be heard.

Display images from multiple cameras sequentially (sequence display)

The sequence display function is the function that can automatically switch and display images from multiple cameras sequentially.

The sequence display will be performed according to the settings configured in advance.

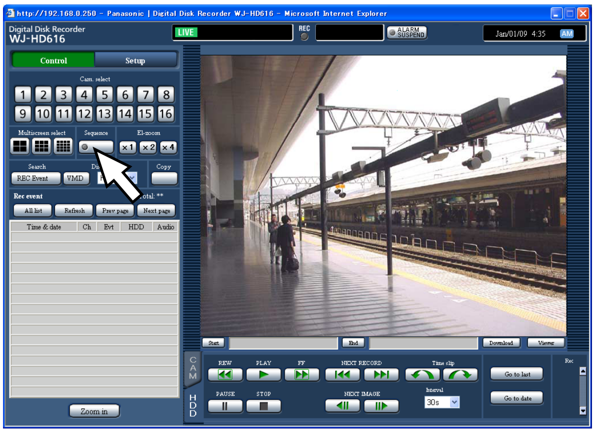
The settings of the sequence display can be configured on the [Network] tab of "Display" of the setup menu (☞ Installation Guide).

Step 1

Display the top page of the operation window.
(☞ Page 77)

Step 2

Click the button in the [Sequence] box.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
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Multiscreen select
Sequence
El-zoom
×1
×2
×4
Search
REC Event
VMD
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All list
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Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

→ Live images from multiple cameras will be displayed sequentially according to the settings configured in advance. The indicator on the [Sequence] button will light green and the "SEQ" indication will be displayed on the status bar.

Step 3

To stop the sequence display, click the button in the [Sequence] box again.

It is also possible to stop the sequence display by operating the recorder to display images on a 1-screen (☞ page 85) or on a multiscreen (☞ page 87) during the sequence display.

Note:

- Audio output will stop during the sequence display.
- When performing the sequence display and displaying images on the web browser, embedded time and camera title will not be displayed.
- When images for a sequence step is unabled to display, this sequence step will be skipped by the camera partitioning function.

Record images

Live images can be recorded on the recorder. Images from up to 16 cameras can be recorded on a single recorder.

Record images (Manual recording)

Recording can be started and stopped manually.

Step 1

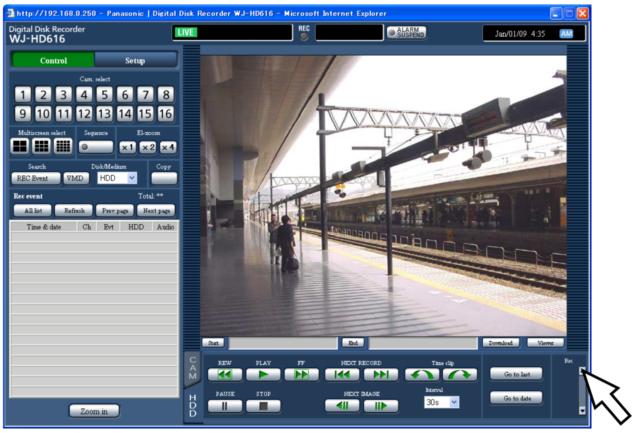
Display the top page of the operation window.
(☞ Page 77)

Step 2

Click the [HDD] tab.
→ The [HDD] tab will be displayed.

Step 3

Click the [▲] button in the [Rec] box.
Continue clicking the [▲] button until the recording button and the recording stop button appear.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
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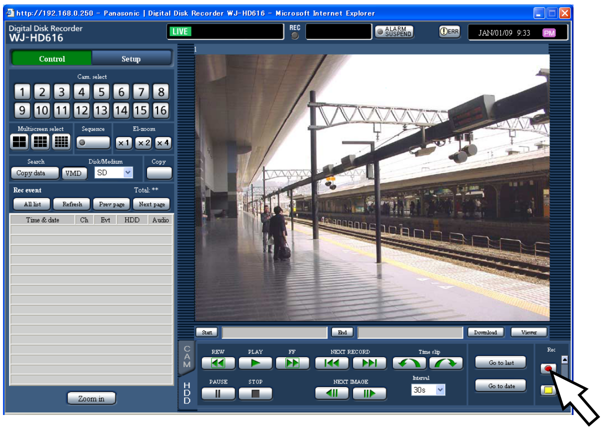
ALARM SUSPEND
Jan/01/09 4:35 AM
Control
Setup
Cam. select
Multiscreen select
Sequence
El-zoom
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
REW
PLAY
FF
NEXT RECORD
Time slip
Go to last
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to date
Rec

→ The recording button will appear in the [Rec] box.

Step 4

Click the recording button ● to start recording.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
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ALARM SUSPEND
ERR
JAN/01/09 9:33 PM
Control
Setup
Cam. select
Multiscreen select
Sequence
El-zoom
Search
Disk/Medium
Copy
Copy data
VMD
SD
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
REW
PLAY
FF
NEXT RECORD
Time slip
Go to last
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to date
Rec

- At the default, images from all the connected cameras will be recorded.
- When images are being recorded in the recording mode with a higher priority than the manual recording, the manual recording will not start until the recording with a higher priority ends.
  Refer to page 37 for further information about the recording mode and their priorities.

→ When recording starts, the [REC] indicator in the status display area will light red.

Step 5

To stop recording, click the stop recording ■ button.
→ The [REC] indicator in the status display area will go off.

Note:

- When recording in a different recording mode is being performed simultaneously, the [REC] indicator will not go off since the recording in a different recording mode will continue even when the manual recording is stopped.
- No image will be recorded by the manual recording for a camera channel from which no video input is sent. When video input is sent from the camera channel, the manual recording will start recording images from it.

Play recorded images

Images recorded on the recorder will be displayed on a PC monitor.
Playback operation can be made while recording.

Step 1

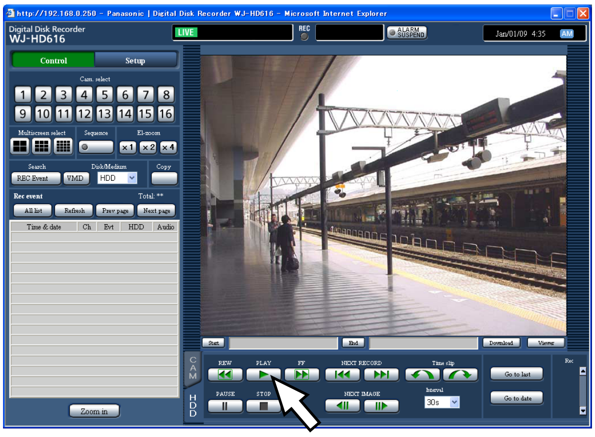
Display the top page of the operation window.
(☞ Page 77)

Step 2

Click the [HDD] tab.
→ The [HDD] tab will be displayed.

Step 3

Click the [PLAY] button.
→ Plays recorded images. The ▶ (play) indication will be displayed in the status display area.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
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Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

The playback start point varies depending on how many times playback is performed after the login as follows.

- The first playback after logging in to the recorder
  The latest recorded image will be played. The playback start point can be set on the setup menu ("Latest image position" on the "Basic" tab under "Basic") (☞ Installation Guide). "30 seconds before the latest" is selected at the default.
- Other than above (The second and subsequent playback after logging in to the recorder.)
  Playback will start from the point at which the last playback was stopped (time and date).

Note:

- It is possible to change the camera channel by clicking the camera selection button during playback.
- It is possible to display recorded images on a multiscreen by clicking a button in the [Multiscreen] box during playback.
- When displaying images on a 1-screen, audio assigned to the camera channel from which images are currently being displayed will be heard.
- When displaying images on a multiscreen, audio assigned to the camera channel from which images are currently being displayed at the upper left corner will be heard.
- When both a web browser and the viewer software are active, playback of audio may not be performed correctly. To play audio correctly, use only either of them and close the other.
- When load to be processed is too heavy for the recorder (such as when many cameras are connected, images (live/playback) are displayed on many windows (segments)), playback speed may become slow or playback may stop for a while.
- When displaying images on a multiscreen, playback will be performed while skipping the current recording.
- When playing images recorded at a higher recording rate and images recorded at a lower recording rate together on a multiscreen, the gap of the displayed time of them will become larger.
- Playback of mages and audio may sometimes not be synchronized.
- When clicking a camera title on the image displayed on a multiscreen, images from the camera whose camera title is clicked will be displayed on a 1-screen.
- The "pause" indication may sometimes be displayed on the status bar before playback is actually paused when the playback point is almost at the end.

Step 4

To stop playback, press the [Stop] button.
→ The ▶ indication will disappear and live images will be displayed in the image display area.

Playback operation

Function	Button	Operation
Pause	❙❙	- Playback will be paused when this button is clicked during playback. - Playback will resume when this button is pressed during pause.
Fast playback/Fast reverse playback	▶▶ / ◀◀	- Playback speed of fast playback will change in the following order each time the fast playback button is clicked: Step2 (Approx. 2x) → Step3 (Approx. 5x) → Step4 (Approx. 10x) → Step5 (Approx. 20x) → Step6 (Approx. 50x) → Step7 (Approx. 100x) - Playback speed of fast reverse playback will change in the following order each time the fast reverse playback button is clicked: Step1 (1x) → Step2 (Approx. 2x) → Step3 (Approx. 5x) → Step4 (Approx. 10x) → Step5 (Approx. 20x) → Step6 (Approx. 50x) → Step7 (Approx. 100x) - When the [PLAY] button is clicked during fast playback/fast reverse playback, playback speed will return to the normal playback speed.
Frame by frame playback/Reverse frame by frame playback	❙❙▶ / ◀❙❙	- When the frame by frame playback button is clicked, the next frame will be displayed and paused. - When the reverse frame by frame playback button is clicked, the previous frame will be displayed and paused.
Skip/Reverse skip	▶▶❙ / ❙◀◀	- When the skip button is clicked, playback point will skip to the start time of the next recorded images. - When the reverse skip button is clicked, playback point will skip to the start time of the previous recorded images. - When there is no next or previous recorded data, the current playback will continue. In this case, playback time of the current playback may sometimes be displayed as around for 1 minute ago.
Time slip/Reverse time slip	↷ / ↶	- When the button is clicked after selecting amount of time to jump (interval), the playback point will jump the selected amount of time (forward) and start playback. - A jumped playback point may sometimes not be a point exactly calculated for the selected amount of time.
Go to date	Go to date	- The "Go to date" window will be displayed by clicking this button. It is possible to start playback by designating the desired time and date.
Skip to the latest recorded data	Go to last	- Playback of the latest recorded image will start by clicking this button. (☞ Page 40)
Multiscreen playback	Multiscreen select ▦ ▦ ▦	- Playback images will be displayed on a multi-screen (4-screen/ 9-screen/16-screen) by clicking this button. - Each time the 4-screen button or the 9-screen button is clicked, images from different camera groups will be displayed on a 4-screen or on a 9-screen respectively. - When the 16-screen button is clicked, images from camera channels 1 - 16 will be displayed on a 16-screen. - To display images on a 1-screen again, click any of the camera channel buttons in the [Cam. select] box.
Electronic zoom	El-zoom ×1 ×2 ×4	- Playback images will be zoomed in by the electronic zoom. Refer to page 86 for how to use the electronic zoom.
Enlargement of images	Zoom in	- Playback images will be enlarged. Refer to page 86 for how to enlarge playback images.

Play image recorded at a designated time and date

Start playback by designating the desired time and date of a recorded image.
Playback operation can be made while recording.

Step 1

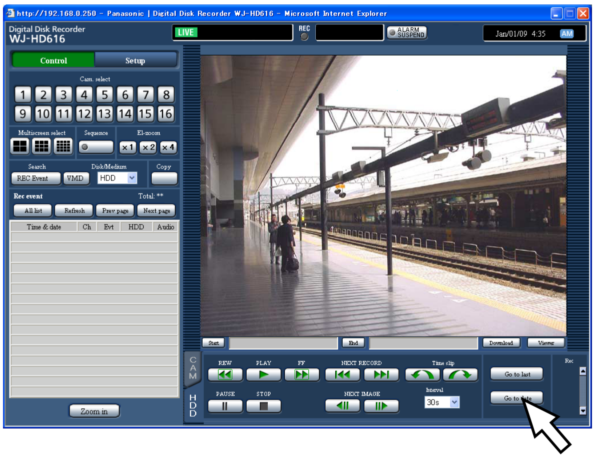
Display the top page of the operation window.
(☞ Page 77)

Step 2

Click the [HDD] tab.
→ The [HDD] tab will be displayed.

Step 3

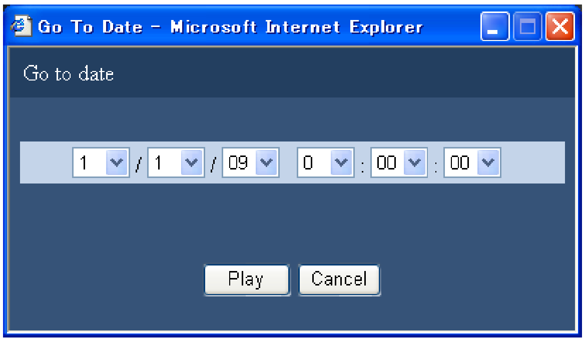
Click the [Go to date] button.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
Jan/01/09 4:35
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
REW
PLAY
FF
NEXT RECORD
Time slip
Go to last
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to date
CAM
HDD

→ The time and date search window will be displayed.

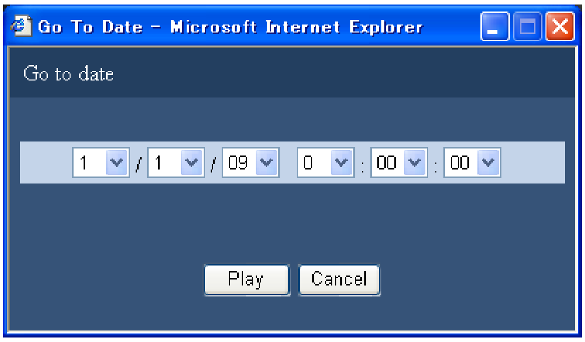
Step 4

Click the ▼ button and determine the desired time and date.


Go To Date - Microsoft Internet Explorer
Go to date
1 / 1 / 09 0 : 00 : 00
Play
Cancel

Step 5

Click the [Play] button.


Go To Date - Microsoft Internet Explorer
Go to date
1 / 1 / 09 0 : 00 : 00
Play
Cancel

→ Playback of images recorded at the designated time and date will start. The ▶ indication will be displayed in the status display area.

Note:

- When no image is found at the designated time and date, the following action will be taken.
    - When images recorded after the designated time and date are found, playback will start from the oldest recorded image among them.
    - When no image was recorded after the designated time and date, playback will start from the latest image recorded before the designated time and date.

Step 6

To stop playback, press the [Stop] button.
→ The indication ▶ on the status display area will disappear and live images will be displayed in the image display area.

Search and play

Search a desired recorded image and play it. There are the following 2 searching methods.

- Search for recording events and play (recording event search)
- Search for time and date when a motion was detected from recorded images and play (VMD search)

To play recorded images on a multiscreen, switch to a multiscreen after starting playback.

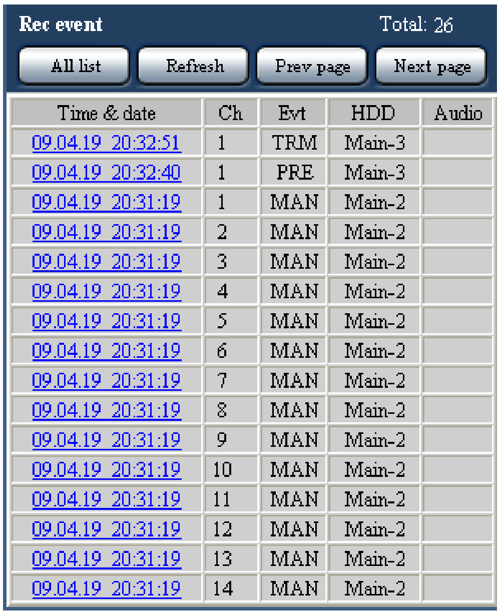
Search and play recording events (recording event search)

Display a list of recording events, and then select a desired recording event to play from the list.
It is also possible to filter recording events using the following search filters.

Search filter

Search filter	Description
Time and date	Search for images recorded in a time range designated by selecting the start time and the end time
Event	Search for images recorded by the selected recording mode only. • Recording mode/Event Manual recording, schedule recording, emergency recording, video loss, terminal alarm, command alarm, video motion detection (VMD), camera site alarm, i-VMD alarm • Displayed when a camera alarm occurred Motion detection, object appearance/disappearance detection, terminal alarm, residence detection, direction detection, interruption detection
Camera	Search for images recorded using the selected camera channels only.

Recording event list



Time & date	Ch	Evt	HDD	Audio
09.04.19 20:32:51	1	TRM	Main-3	
09.04.19 20:32:40	1	PRE	Main-3	
09.04.19 20:31:19	1	MAN	Main-2	
09.04.19 20:31:19	2	MAN	Main-2	
09.04.19 20:31:19	3	MAN	Main-2	
09.04.19 20:31:19	4	MAN	Main-2	
09.04.19 20:31:19	5	MAN	Main-2	
09.04.19 20:31:19	6	MAN	Main-2	
09.04.19 20:31:19	7	MAN	Main-2	
09.04.19 20:31:19	8	MAN	Main-2	
09.04.19 20:31:19	9	MAN	Main-2	
09.04.19 20:31:19	10	MAN	Main-2	
09.04.19 20:31:19	11	MAN	Main-2	
09.04.19 20:31:19	12	MAN	Main-2	
09.04.19 20:31:19	13	MAN	Main-2	
09.04.19 20:31:19	14	MAN	Main-2	

Number of the listed data
Displays the total number of listed copied data. When more than 10 000 data matched, the ">10000" indication will be displayed.

[All list] button
Cancels filtering and lists all recording events.

[Refresh] button
The displayed contents will be updated to the latest.

[Prev page] button
Displays the previous page.

[Next page] button
Displays the next page.

Time & date
Displays the start time and date of the recording.

Ch
Displays the camera channel used for recording. Playback of images recorded using the displayed camera channel will start on a 1-screen.

Evt
Displays the event type. Refer to page 8 for further information about the event type.

HDD
Displays the hard disk drive number on which images were recorded.

Audio
Displays the icon to indicate whether audio is attached to the data or not.

Note:
- Recording event list will be displayed when the [Refresh] button is clicked or when the VMD search (☞ page 96) or selection of the disk/medium (☞ page 99) is performed.
- The [All list] button will become unavailable during playback. To use the [All list] button, stop playback and click it.
- When many cameras are connected, the recording start time of each camera channel may sometimes not be the same.

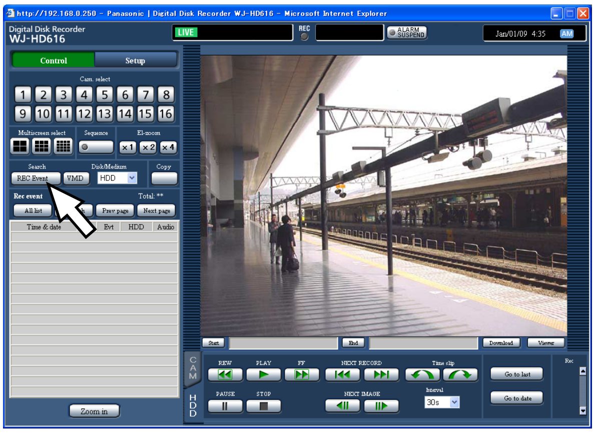
How to operate

Step 1

Display the top page of the operation window.
(☞ Page 77)

Step 2

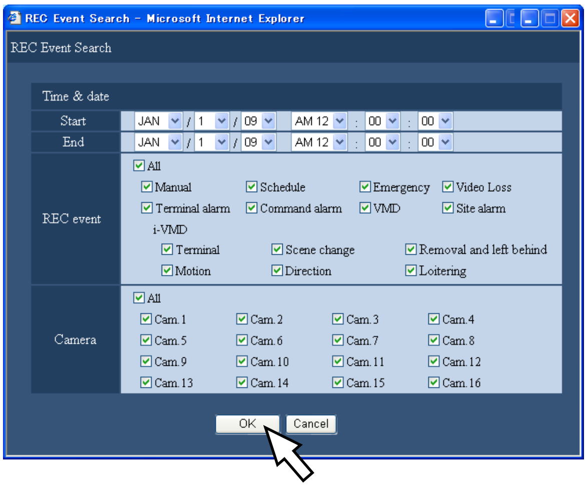
Select "HDD" for "Disk/Media" in the [Search] box, and then click the [REC Event] button.


Digital Disk Recorder
WJ-HD616
LIVE
Control
Setup
Cam. select
Search
Disk/Medium
REC Event
VMD
HDD
Rec event
All list
Prev page
Next page
Time & date
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
REW
PLAY
FF
NEXT RECORD
PAUSE
STOP
NEXT IMAGE
Go to last
Go to date

→ The "REC event search" window will be displayed.

Step 3

Specify the search conditions (filters).


REC Event Search - Microsoft Internet Explorer

REC Event Search

Time & date
Start JAN / 1 / 09 AM 12 : 00 : 00
End JAN / 1 / 09 AM 12 : 00 : 00

REC event
☑ All
☑ Manual ☑ Schedule ☑ Emergency ☑ Video Loss
☑ Terminal alarm ☑ Command alarm ☑ VMD ☑ Site alarm
i-VMD
☑ Terminal ☑ Scene change ☑ Removal and left behind
☑ Motion ☑ Direction ☑ Loitering

Camera
☑ All
☑ Cam. 1 ☑ Cam. 2 ☑ Cam. 3 ☑ Cam. 4
☑ Cam. 5 ☑ Cam. 6 ☑ Cam. 7 ☑ Cam. 8
☑ Cam. 9 ☑ Cam. 10 ☑ Cam. 11 ☑ Cam. 12
☑ Cam. 13 ☑ Cam. 14 ☑ Cam. 15 ☑ Cam. 16

Time & date: Designate the recording start time and date and the end time and date of recorded images to be searched for.
Select a start time and an end time by clicking the [▼] button.

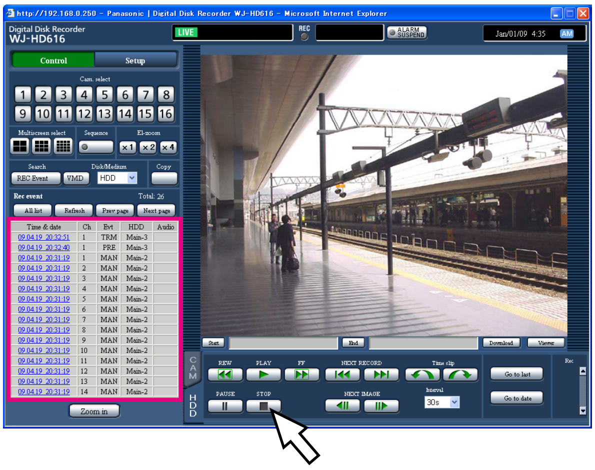
REC event: Select an event type of recorded images to be searched for from the following. The checkbox respective to the selected event type will be checked. (When selecting "All", all the checkboxes will be checked.)

Camera: Select the desired camera channel used for recording to be searched by clicking.
Select the desired camera channel used for recording. The checkbox respective to the selected camera channel will be checked. (When selecting "All", all the checkboxes will be checked.) To select all camera channels, click "All".

Step 4

Click the [OK] button after completing the settings.

→ Recording events matched the search conditions will be displayed in the recording event list. The [Filtering] indication will be displayed on the status display area.


http://192.168.0.250 – Panasonic | Digital Disk Recorder WJ-HD616 – Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
Jan/01/09 4:35
AM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: 26
All list
Refresh
Prev page
Next page
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

Time & date	Ch	Evt	HDD	Audio
09.04.19 20:32:51	1	TRM	Main-3	
09.04.19 20:32:40	1	PRE	Main-3	
09.04.19 20:31:19	1	MAN	Main-2	
09.04.19 20:31:19	2	MAN	Main-2	
09.04.19 20:31:19	3	MAN	Main-2	
09.04.19 20:31:19	4	MAN	Main-2	
09.04.19 20:31:19	5	MAN	Main-2	
09.04.19 20:31:19	6	MAN	Main-2	
09.04.19 20:31:19	7	MAN	Main-2	
09.04.19 20:31:19	8	MAN	Main-2	
09.04.19 20:31:19	9	MAN	Main-2	
09.04.19 20:31:19	10	MAN	Main-2	
09.04.19 20:31:19	11	MAN	Main-2	
09.04.19 20:31:19	12	MAN	Main-2	
09.04.19 20:31:19	13	MAN	Main-2	
09.04.19 20:31:19	14	MAN	Main-2	

Note:

- To cancel the filtering, click the [All List] button. All recording events will be displayed and the [Filtering] indication will disappear.

Step 5

Click the time and date of the desired recording event.

→ Playback of recorded images of the selected recording event will start.

Note:

- When starting playback after filtering, only the listed recorded images are subject to play.
- Recorded images will be played on a 1-screen. To play on a multiscreen, click a multiscreen selection button in the [Multiscreen select] box after starting playback.

Step 6

To stop playback, press the [STOP] button.

→ Playback will stop. Playback in the image display area will be switched to live image display.

Search for time and date when a motion was detected from recorded images and play (VMD search)

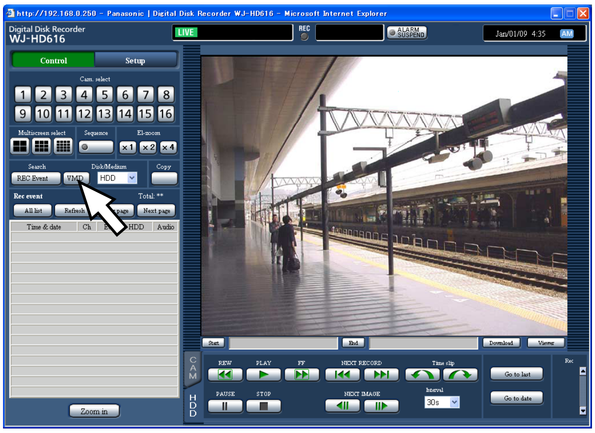
Display a list of time and date when a motion was detected (by the VMD function) from images recorded by all the recording modes (☞ page 37), and then select a desired recorded image to play from the list.
Camera channels, time and date, detection area and detection sensitivity can be used as the filters for the VMD search.

Step 1

Display the top page of the operation window (☞ page 77), and then select the camera channel to be searched for in the [Cam. select] box.

Step 2

Click the [VMD] button in the [Search] box.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
Control
Setup
Cam. select
Search
REC Event
VMD
HDD
Zoom in

→ The VMD search filter window will be displayed.

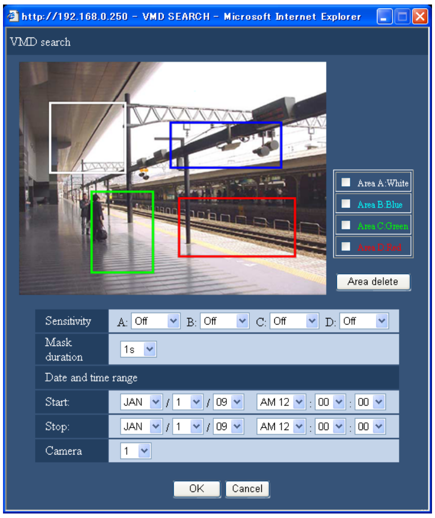
Step 3

Specify the search conditions (filters).

Set detection area and detection sensitivity

Up to 4 detection areas (A - D) can be set. Set detection areas and detection sensitivities for each of them as follows.

1. Create a detection area by dragging the mouse.
   Up to 4 areas can be created and they will be area A, B, C and D in order or creation.


http://192.168.0.250 - VMD SEARCH - Microsoft Internet Explorer
VMD search
☐ Area A:White
☐ Area B:Blue
☐ Area C:Green
☐ Area D:Red
Area delete
OK
Cancel

Sensitivity A: Off B: Off C: Off D: Off

Mask duration 1s

Date and time range

Start: JAN / 1 / 09 AM 12 : 00 : 00

Stop: JAN / 1 / 09 AM 12 : 00 : 00

Camera 1

Note:

- To delete the created detection area, check the check box corresponding to the area to be deleted on the area setup window and then click the [Area delete] button.

---

2. Set the detection sensitivity of each detection area.
   Click the [▼] button, and then set the detection sensitivity for each area (A - D) from the following.
   Off: Does not detect motion in the selected area.
   Low: Low sensitivity
   Mid: Standard sensitivity
   High: High sensitivity

Specify the mask duration

Click the [▼] button, and then select the mask duration from the following.

1 s, 1 min, 1 h, 24h

When the mask duration is set, any motion will not be detected for the set duration after a motion detection. Use the mask duration when it takes time to detect motion or when motion is detected frequently.

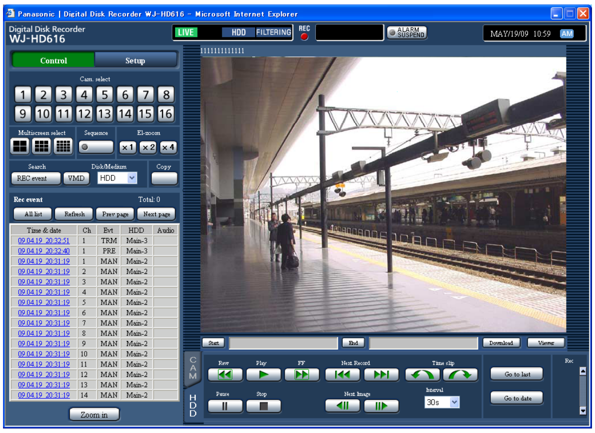
Specify the time range

Click the [▼] button, and then specify the time range to be searched for.

Step 4

Click the [OK] button after completing the settings.

→ Data matched to the specified search conditions will be displayed in list form.


Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
HDD
FILTERING
REC
ALARM SUSPEND
MAY/19/09 10:59
AM
Control
Setup
1111111111111
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: 0
All list
Refresh
Prev page
Next page
Zoom in
Start
End
Download
Viewer
CAM
HDD
Rew
Play
FF
Next Record
Time slip
Pause
Stop
Next Image
Interval
30s
Go to last
Go to date
Rec

Time & date	Ch	Evt	HDD	Audio
09.04.19 20:32:51	1	TRM	Main-3	
09.04.19 20:32:40	1	PRE	Main-3	
09.04.19 20:31:19	1	MAN	Main-2	
09.04.19 20:31:19	2	MAN	Main-2	
09.04.19 20:31:19	3	MAN	Main-2	
09.04.19 20:31:19	4	MAN	Main-2	
09.04.19 20:31:19	5	MAN	Main-2	
09.04.19 20:31:19	6	MAN	Main-2	
09.04.19 20:31:19	7	MAN	Main-2	
09.04.19 20:31:19	8	MAN	Main-2	
09.04.19 20:31:19	9	MAN	Main-2	
09.04.19 20:31:19	10	MAN	Main-2	
09.04.19 20:31:19	11	MAN	Main-2	
09.04.19 20:31:19	12	MAN	Main-2	
09.04.19 20:31:19	13	MAN	Main-2	
09.04.19 20:31:19	14	MAN	Main-2	

Note:

- In the result list of the VMD search, the audio icon will not be displayed in the "Audio" column even if audio is attached to the recorded images.
- The VMD search of the pre-event recording data will not be performed.

Step 5

Click the time and date of the desired data in the result list.

→ Playback of recorded images of the selected data will start.

Note:

- Recorded images will be played on a 1-screen. To play on a multi-screen, click a multiscreen selection button in the [Multiscreen select] box after starting playback.
- When selected time and date is too close to the current time and date, playback may sometimes not start. In this case, wait for a while and try to playback again.

Step 6

To stop playback, click the [STOP] button.

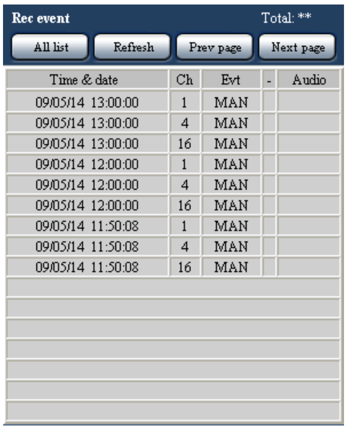
→ Playback will stop. Playback in the image display area will be switched to live image display.

Check a list of copied recorded images

Display a list of copied data (copied recorded images) on an SDHC/SD memory card or a DVD, and then select a desired recorded image to play from the list.

It is possible to search for copied data using the filters. Available filters are "Time & date" and "Ch".

Copied data list window



Time & date	Ch	Evt	-	Audio
09/05/14 13:00:00	1	MAN		
09/05/14 13:00:00	4	MAN		
09/05/14 13:00:00	16	MAN		
09/05/14 12:00:00	1	MAN		
09/05/14 12:00:00	4	MAN		
09/05/14 12:00:00	16	MAN		
09/05/14 11:50:08	1	MAN		
09/05/14 11:50:08	4	MAN		
09/05/14 11:50:08	16	MAN		

Number of the listed data

Displays the total number of listed copied data. When more than 10 000 data matched, the ">10000" indication will be displayed.

[All list] button

Cancels filtering and lists all copied data.

[Refresh] button

The displayed contents will be updated to the latest.

[Prev page] button

Displays the previous page.

[Next page] button

Displays the next page.

Time & date

Displays the start time and date of the copied data (time and date when copying started) will be displayed.

Ch

Displays the camera channel used for recording (of which copied recorded images).

Evt

Displays the event type. Refer to page 8 for further information about the event type.

Audio

Nothing will be displayed here.

How to operate

Step 1

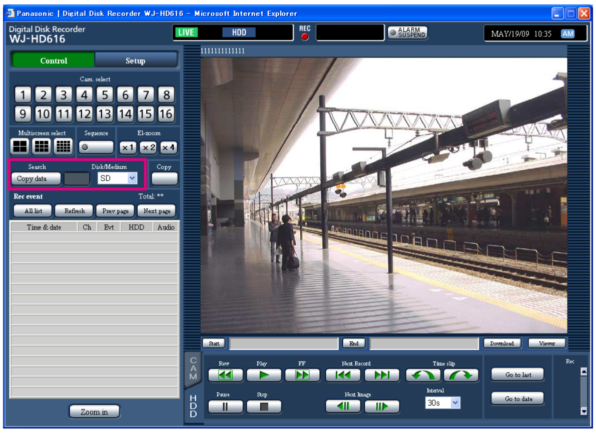
Insert an SDHC/SD memory card on which recording data is copied into the SDHC/SD memory card slot. When recording data was copied on a DVD, insert it in the DVD drive. (☞ Installation Guide)

Step 2

Display the top page of the operation window. (☞ Page 77)

Step 3

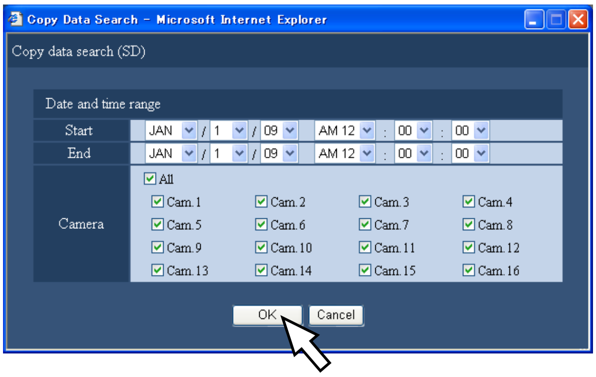
Select "DVD" or "SD" for "Disk/Medium" in the [Search] box, and then click the [Copy data] button.


Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
MAY/19/09 10:35
Control
Setup
Cam. select
Multiscreen select
Sequence
El-zoom
Search
Copy data
Disk/Medium
SD
Copy
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in

→ The copy data search window will be displayed.

Step 4

Specify the search conditions (filters).
Refer to page 94 for further information about the copy data search window.



Copy Data Search - Microsoft Internet Explorer

Copy data search (SD)

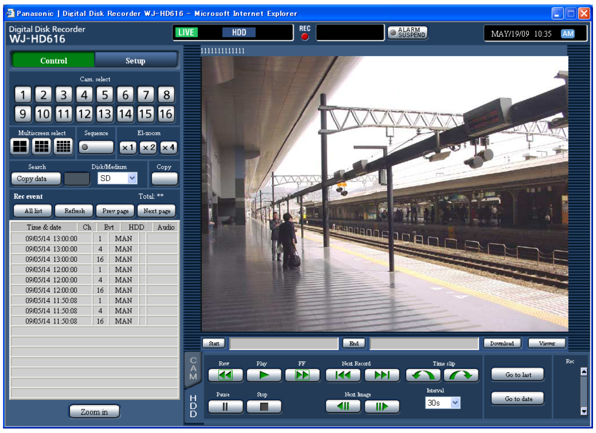
Date and time range

Start: JAN / 1 / 09 AM 12 : 00 : 00
End: JAN / 1 / 09 AM 12 : 00 : 00

Camera: ☑ All
☑ Cam.1 ☑ Cam.2 ☑ Cam.3 ☑ Cam.4
☑ Cam.5 ☑ Cam.6 ☑ Cam.7 ☑ Cam.8
☑ Cam.9 ☑ Cam.10 ☑ Cam.11 ☑ Cam.12
☑ Cam.13 ☑ Cam.14 ☑ Cam.15 ☑ Cam.16

Step 5

Click the [OK] button after completing the settings.
→ Copied data matched the search conditions (filters) will be displayed on the copied data list window.


Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
MAY/19/09 10:35
Control
Setup
Search
Copy data
Disk/Medium
SD
Copy
Rec event
Total: **
All list
Refresh
Prev page
Next page
Zoom in

Time & date	Ch	Evt	HDD	Audio
09/05/14 13:00:00	1	MAN		
09/05/14 13:00:00	4	MAN		
09/05/14 13:00:00	16	MAN		
09/05/14 12:00:00	1	MAN		
09/05/14 12:00:00	4	MAN		
09/05/14 12:00:00	16	MAN		
09/05/14 11:50:08	1	MAN		
09/05/14 11:50:08	4	MAN		
09/05/14 11:50:08	16	MAN		

Important:

- Do not remove the SDHC/SD memory card during playback of copied data on the SDHC/SD memory card. It may damage data on the SDHC/SD memory card.

Note:

- When checking a list after inserting the other SDHC/SD memory card, select "Hard disk drive" for "Select Medium" in the "Search" box first and then select "SD memory card".

Event function

The recorder will take an event action when any of the following events occur.

Terminal alarm: Regarded as an event when an alarm input signal is supplied from an external device such as a door sensor to the alarm input terminal on the rear of the recorder.

Video Motion Detection (VMD): Regard as an event when a motion is detected in the set detection area by the video motion detection function. (See below about the VMD function.)

Video loss: Regard as an event when the video input signal is lost, such as by the camera cable disconnection, malfunction of the camera, etc.

i-VMD alarm: Regarded as an event when an alarm (motion detection, object appearance/disappearance, etc.) is detected by the SD5Link camera.

Camera site alarm: Regarded as an event when an alarm (motion detection, etc.) is detected by the camera.

Command alarm: Regarded as an event when an alarm via a network such as from a PC is received.

Note:

- Video Motion Detection (VMD) function
  When a motion (luminance change) is detected in the specified area (detection area), a signal will be output. The recorder will record images from the camera, send e-mails, etc. according to the settings when a motion is detected.
  Refer to the Installation Guide for the settings required to use the video motion detection function.

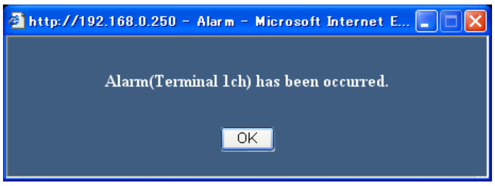
Event action

Refer to page 56.

Alarm action

The following are descriptions about the alarm actions that can be configured and checked from a PC.
Refer to page 56 for further information about the available alarm actions for the recorder.

Display the alarm notification window

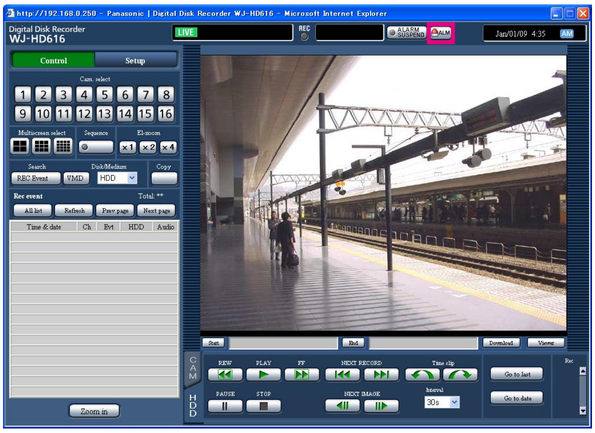


Alarm(Terminal 1ch) has been occurred.

Note:

- The alarm notification window will not be displayed in the following cases.
  - When the alarm is suspended (☞ page 102)
  - When "ADM" is selected for "Operational mode" (of each event) of "Event" of the setup menu
  - When "Off" is selected for "Alarm message" of "Timetable" (under "Schedule" of the setup menu).

Display the [ALM] button in the status display area


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
ALM
Jan/01/09 4:35
AM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

Send a mail that notifies of an event occurrence

A mail that notifies of the event occurrence with the time and date of the event occurrence will be sent (Alarm mail).
Up to 4 destination addresses for the alarm mail can be registered.
To send alarm mails at an event occurrence, configure the settings in advance.
Refer to page 122 for further information about contents of the alarm mail.

Send recorded images to an FTP server at an event occurrence

When an event occurs, recorded images will be continued transmitting to an FTP server automatically for the set duration from the time when the event occurred. To send recorded images to an FTP server at an event occurrence, configure the settings in advance.

Note:

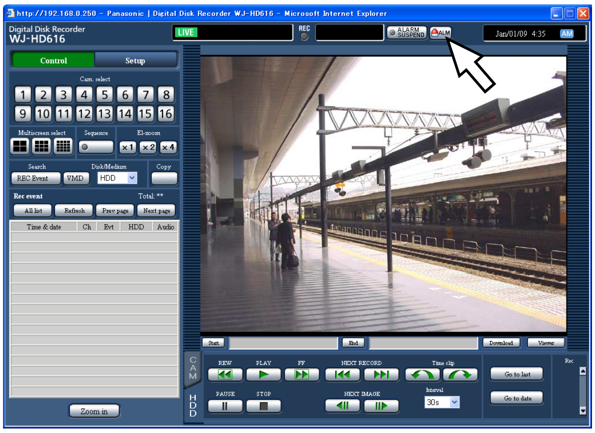
- Images recorded from the start time of the event recording are to be sent to an FTP server. When multiple events occurred, only images recorded from the start time of the first event recording will be sent.

Cancel the alarm action

The recorder will take an alarm action according to the settings configured in advance when an event occurs in the alarm mode (ALM). To manually cancel the alarm action, perform the following operation.

Step 1

Click the [ALM] button displayed in the status display area.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
ALM
Jan/01/09 4:35
Control
Setup
Zoom in

→ The alarm action will be canceled.

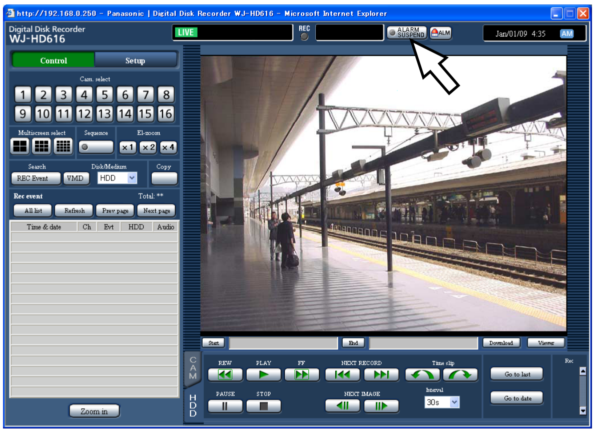
Note:
- When the alarm action is canceled, the event recording will stop and return to the operational status just before the event occurred.
- The emergency recording will not stop by clicking the [ALM] button when the emergency recording is being performed. It will stop only when "Continue" is selected for "Recording duration" on the "Emergency rec." page.

Suspend the alarm action

Configure the settings to not to perform the alarm action even when an event occurs. It is useful to suspend the alarm action at an event occurrence such when maintaining the recorder for a certain period. However, recording, filing of event logs, preset action and displaying of the [ALM] button will be performed even though the alarm action is being suspended.

Step 1

Display the operation window.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
ALM
Jan/01/09 4:35
Control
Setup
Zoom in

Step 2

Click the [ALARM SUSPEND] button.
The [ALARM SUSPEND] indicator will light and the alarm action will be suspended.

Step 3

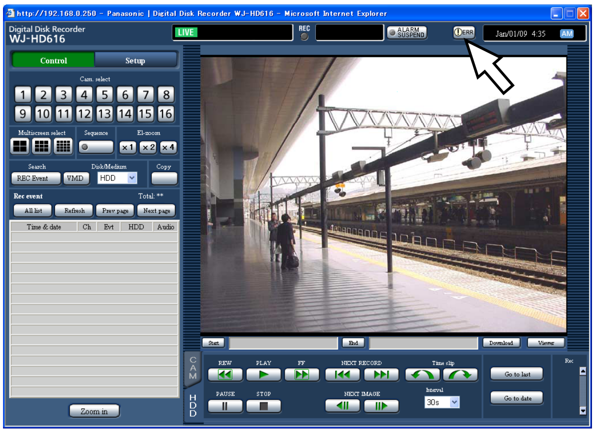
Click the [ALARM SUSPEND] button.
The [ALARM SUSPEND] indicator will go off and the suspended alarm action will be released.

Cancel an error action

When an error occurred, this recorder will take an error action. To manually cancel an error action, perform the following operation.

Step 1

When an error occurs, the [ERR] button will be displayed in the status display area.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
ERR
Jan/01/09 4:35
AM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

Step 2

Click the [ERR] button.

→ The error action will be canceled.

Note:

- Depnding on the error type, the error indicator on the front panel may not go ff even after the [ERR] button is clicked.

Copy recorded images

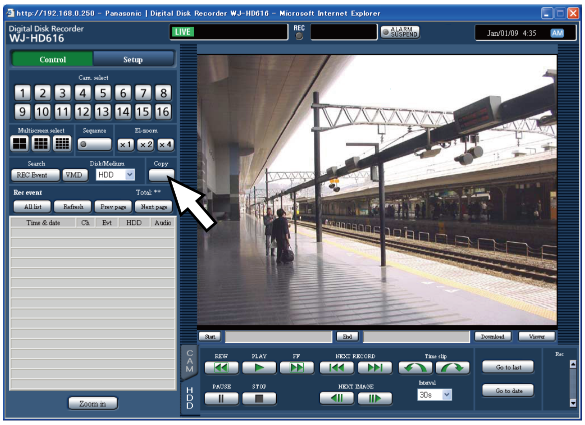
It is possible to manually copy images recorded in the recorder onto a DVD or an SDHC/SD memory card. It is recommended to make back-up copies on a regular basis for unexpected situations such as malfunction of the hard disk drives.
Refer to page 59 for further information about the copy function.

Step 1

Display the top page of the operation window.
(☞ Page 77)

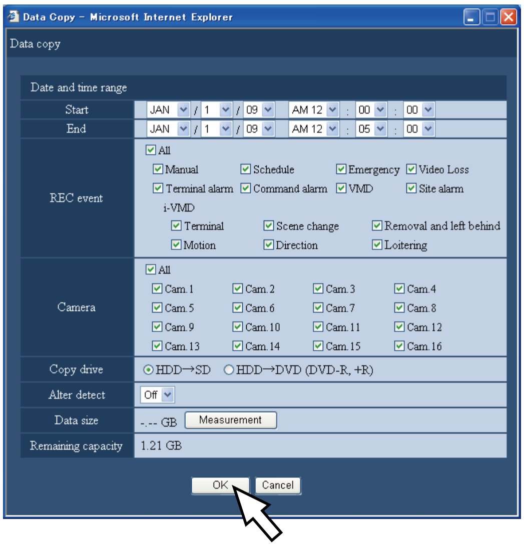
Step 2

Click the button in the [Copy] box.
→ The data copy window will be displayed.


http://192.168.0.250 – Panasonic | Digital Disk Recorder WJ-HD616 – Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
Jan/01/09 4:35 AM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to last
Go to date
Rec

Step 3

Specify the detailed conditions of recorded images to be copied.



Data Copy – Microsoft Internet Explorer

Data copy

Date and time range
Start: JAN / 1 / 09 AM 12 : 00 : 00
End: JAN / 1 / 09 AM 12 : 05 : 00

REC event:
☑ All
☑ Manual ☑ Schedule ☑ Emergency ☑ Video Loss
☑ Terminal alarm ☑ Command alarm ☑ VMD ☑ Site alarm
i-VMD
☑ Terminal ☑ Scene change ☑ Removal and left behind
☑ Motion ☑ Direction ☑ Loitering

Camera:
☑ All
☑ Cam. 1 ☑ Cam. 2 ☑ Cam. 3 ☑ Cam. 4
☑ Cam. 5 ☑ Cam. 6 ☑ Cam. 7 ☑ Cam. 8
☑ Cam. 9 ☑ Cam. 10 ☑ Cam. 11 ☑ Cam. 12
☑ Cam. 13 ☑ Cam. 14 ☑ Cam. 15 ☑ Cam. 16

Copy drive: ● HDD→SD ○ HDD→DVD (DVD-R, +R)
Alter detect: Off
Data size: -.-- GB Measurement
Remaining capacity: 1.21 GB

OK Cancel

Date and time range: Designate the start time and date and the end time and date of recorded images to be copied.
Click the [▼] button, and then designate time and date.

REC event: Select an event type of recorded images from the following. Select the event type by checking the checkbox corresponding to the desired event type. The checkbox respective to the selected event type will be checked. (When selecting "All", all the checkboxes will be checked.)

Camera: Select a camera channel used for recording. Select the camera channel by checking the checkbox corresponding to the desired camera channel. To select all camera channels, select "All".

Copy drive: Select a DVD or an SDHC/SD memory card as a copying destination.
Check the checkbox corresponding to either of "HDD → DVD" or "HDD → SDHC/SD memory card".

Alter detect: Determine whether or not to attach the alteration detection code to the recorded images to be copied.
When the alteration detection code is attached, it is possible to check if the copied recorded images have been altered or not when playing the copied recorded images using the viewer software.
Click the [▼] button, and then select "On" or "Off".

Data size: When the [Measurement] button is clicked, size of the data to be copied will be displayed.

Remaining capacity: The remaining capacity of the destination media (SDHC/SD memory card or DVD) will be displayed.

Step 4

Click the [OK] button.
→ The data copy window will close. Copying will start and the [COPY] icon COPY will be displayed in the status display area. When copying is complete, the [COPY] icon will disappear.

Note:

- When selecting "DVD Drive" even though an optional built-in DVD drive is not installed, the error message of "No media is inserted" will be displayed.

Important:

- Do not remove the SDHC/SD memory card during copying on the SDHC/SD memory card. It may damage data on the SDHC/SD memory card.
- In the following cases, copying will not start even when the [COPY] button is clicked.
  - When the end time is set earlier than the start time
- Copying will be performed even when the remaining capacity of the destination media is not enough for copying.
- When clicking the button in the [COPY] box during copying, the confirmation window for cancellation of the current copying will be displayed. It is possible to cancel the current copying on this window.

Download recorded images currently being played

Designate the start point and the end point of recorded images currently being played and download images to a PC.
When downloading recorded images, recorded images and audio will be downloaded as an image data file (filename.n3r) and an audio data file (filename.n3a) respectively. Refer to page 108 for information on how to play downloaded recorded images.

Important:

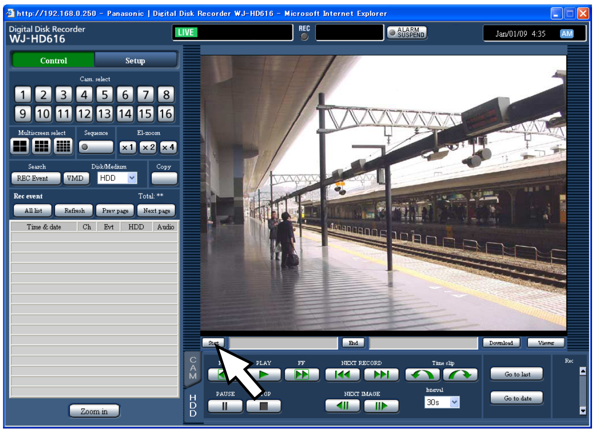
- When downloading, the available disk capacity must be 2 or more times the size of the file to be downloaded*.* It is a feature of Internet Explorer.
- When download is canceled in the process of the download, it may be impossible to properly play the downloaded file on a PC.

Step 1

Display the top page of the operation window.
(☞ Page 77)

Step 2

Operation can be performed when recorded images are being played on a 1-screen.
Click the [Start] button in the download operation area at the desired point to set as the start point of the recorded images to be downloaded, or enter time and date in the "Start" box directly.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
Jan/01/09 4:35
AM
Control
Setup
Cam. select
Multiscreen select
Sequence
El-zoom
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
PLAY
FF
NEXT RECORD
Time slip
PAUSE
NEXT IMAGE
Interval
30s
Go to last
Go to date
CAM
HDD

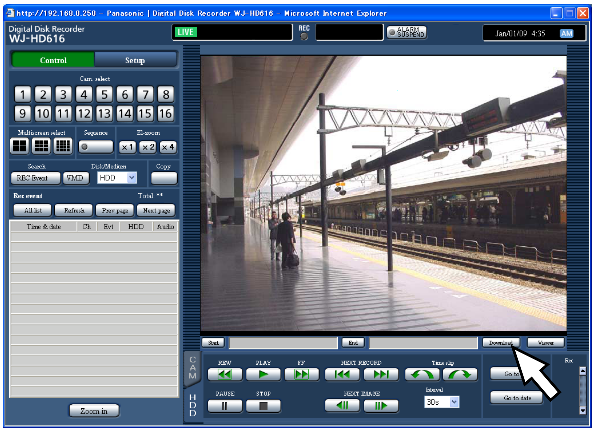
→ The time and date of the start point will be displayed next to the [Start] button.

Step 3

Click the [End] button in the download operation area at the desired point to set as the end point of the recorded images to be downloaded, or enter time and date in the "End" box directly.
→ The time and date of the end point will be displayed next to the [End] button. It is possible to designate up to 20 minutes of the time range per download.

Step 4

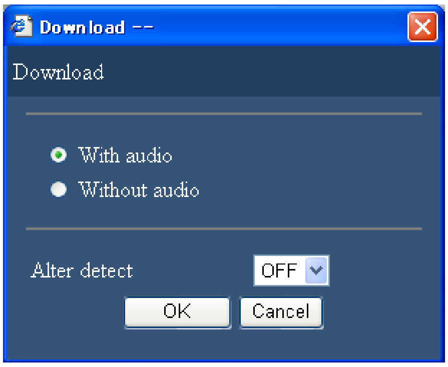
Click the [Download] button.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
REC
ALARM SUSPEND
Jan/01/09 4:35
AM
Control
Setup
Cam. select
Multiscreen select
Sequence
El-zoom
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: **
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
REW
PLAY
FF
NEXT RECORD
Time slip
PAUSE
STOP
NEXT IMAGE
Interval
30s
Go to date
CAM
HDD

→ The "Download" window will be displayed.

Step 5

Click the [OK] button after selecting "With audio" or "Without audio" to determine whether or not to download images with audio and "ON" or "OFF" for "Alter detect" to determine whether or not to attach an alteration detection code to recorded images to be downloaded.



→ The file download window will be displayed.

Step 6

Click the [Save] button.

→ The "Save As" window will be displayed.

Note:

- When "With audio" is selected, the "Download" window will be displayed again after the download is complete.

Step 7

Create a new folder in the desired directory and click the [Save] button.

→ Recorded images and audio will be downloaded as an image data file (filename.n3r) and an audio data file (filename.n3a) respectively.

Note:

- If a message is displayed on the information bar, see page 127.
- When playing on a multiscreen, it is impossible to download recorded images.

Play the copied/downloaded recorded images

When recorded images are copied/downloaded, recorded images and audio will be copied/downloaded as an image data file (filename.n3r) and an audio data file (filename.n3a) respectively into the copy/download destination. It is possible to play, save and print the copied/downloaded data files using the dedicated viewer software.

Viewer software to play recorded images copied on an SDHC/SD memory card or a DVD

Double-click the executable file (HD_Viewer.exe) to launch the viewer software. The executable folder is copied in the following folder together with recorded images.

Copy destination: SDHC/SD memory card
[Drive]: \PRIVATE\MEIGROUP\PSS\HDR\HD_Viewer
Copy destination: DVD
[Drive]: \

Refer to page 111 for how to use the viewer software.

Note:

- The viewer software copied onto an SDHC/SD memory card or a DVD is software that can be launched without installation on a PC. When copying the viewer software to the other folder, copy all the files.

Viewer software to play recorded images downloaded using a web browser

It is necessary to install the viewer software to a PC to play downloaded recorded images using the viewer software.

Download the viewer software using a web browser and install it on a PC to use the viewer software to play recorded images.

- Donload the viewer software (☞ page 108)
- Install the viewer software (☞ page 109)

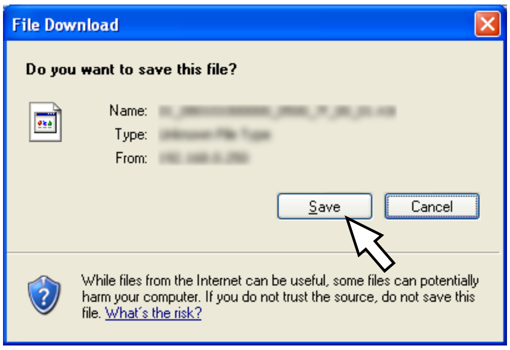
Refer to page 111 for how to use the viewer software.

Download the viewer software

Step 1

Click the [Viewer] button in the download operation area.

→ The "File download" window will be displayed.



File Download

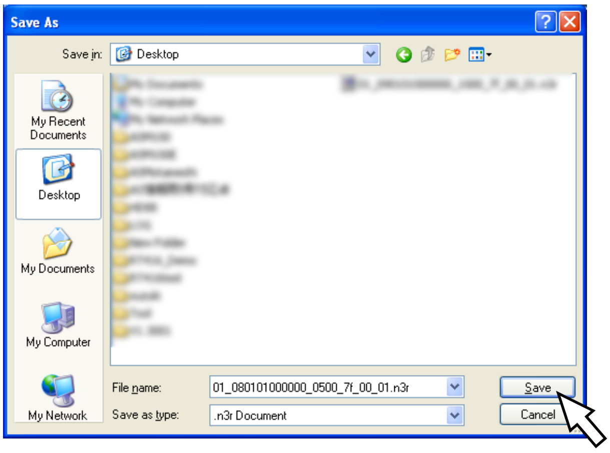
Do you want to save this file?

While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not save this file. What's the risk?

Step 2

Click the [Save] button.

→ The "Save As" window will be displayed.



Save As

Save in: Desktop

File name: 01_080101000000_0500_7f_00_01.n3r

Save as type: .n3r Document

Step 3

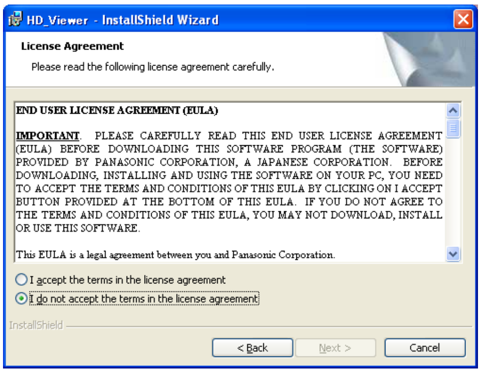
Create a new folder in the desired directory and click the [Save] button.
→ The viewer software will be downloaded.

Install the viewer software

When the older version of the viewer software is installed on a PC, uninstall it before installing the newer version.

Step 1

Double-click the downloaded file (hdrsetup.exe).
→ The install wizard window will be displayed.


HD_Viewer - InstallShield Wizard
InstallShield
< Back
Next >
Cancel

License Agreement

Please read the following license agreement carefully.

END USER LICENSE AGREEMENT (EULA)

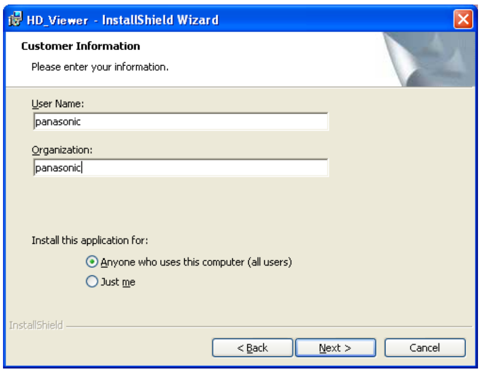
IMPORTANT. PLEASE CAREFULLY READ THIS END USER LICENSE AGREEMENT (EULA) BEFORE DOWNLOADING THIS SOFTWARE PROGRAM (THE SOFTWARE) PROVIDED BY PANASONIC CORPORATION, A JAPANESE CORPORATION. BEFORE DOWNLOADING, INSTALLING AND USING THE SOFTWARE ON YOUR PC, YOU NEED TO ACCEPT THE TERMS AND CONDITIONS OF THIS EULA BY CLICKING ON I ACCEPT BUTTON PROVIDED AT THE BOTTOM OF THIS EULA. IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS OF THIS EULA, YOU MAY NOT DOWNLOAD, INSTALL OR USE THIS SOFTWARE.

This EULA is a legal agreement between you and Panasonic Corporation.

○ I accept the terms in the license agreement
● I do not accept the terms in the license agreement

Step 2

Select "Agree", and then click the [Next] button.
→ The user information entry fields will be displayed.


HD_Viewer - InstallShield Wizard
InstallShield
< Back
Next >
Cancel

Customer Information

Please enter your information.

User Name: panasonic

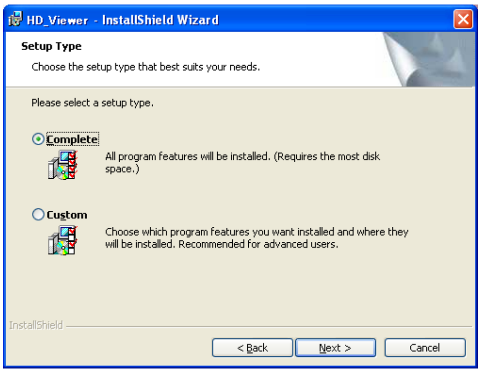
Organization: panasonic

Install this application for:

● Anyone who uses this computer (all users)
○ Just me

Step 3

Complete the user information on the user information entry window, and then click the [Next] button.
→ The setup type section radio buttons will be displayed.
User information entry is not required to proceed.


HD_Viewer - InstallShield Wizard
InstallShield
< Back
Next >
Cancel

Setup Type

Choose the setup type that best suits your needs.

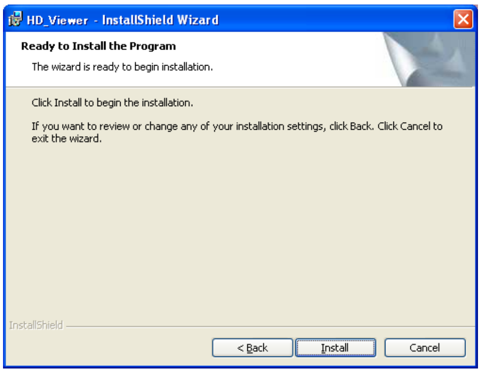
Please select a setup type.

● Complete
All program features will be installed. (Requires the most disk space.)

○ Custom
Choose which program features you want installed and where they will be installed. Recommended for advanced users.

Step 4

Select "All", and then click the [Next] button.
→ The wizard is ready to install.


HD_Viewer - InstallShield Wizard
InstallShield
< Back
Install
Cancel

Ready to Install the Program

The wizard is ready to begin installation.

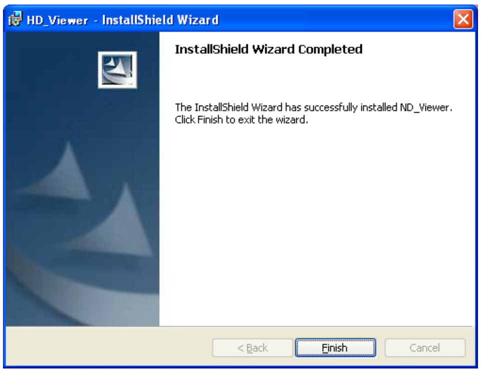
Click Install to begin the installation.

If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.

Step 5

Click the [Install] button.

→ When the installation is complete, the installation completion window will be displayed.



InstallShield Wizard Completed

The InstallShield Wizard has successfully installed ND_Viewer.
Click Finish to exit the wizard.

Step 6

Click the [Complete] button.

→ Installation of the viewer software is complete.

Uninstall the viewer software

For Windows XP

Step 1

Open "Add or Remove Programs" in "Control Panel".

Step 2

Select "HD_Viewer" (the program to be deleted) from the presently installed programs, and then click the [Remove] button.

→ The uninstallation program will be launched.

Step 3

Complete the uninstallation by following the instructions of the wizard.

For Windows Vista

Step 1

Open "The uninstall program" in "Control Panel".

Step 2

Select "HD_Viewer" (the program to be deleted) from the presently installed programs, and then right-click on it. Select "Uninstall and Change" from the displayed right-click menu.

→ The uninstallation program will be launched.

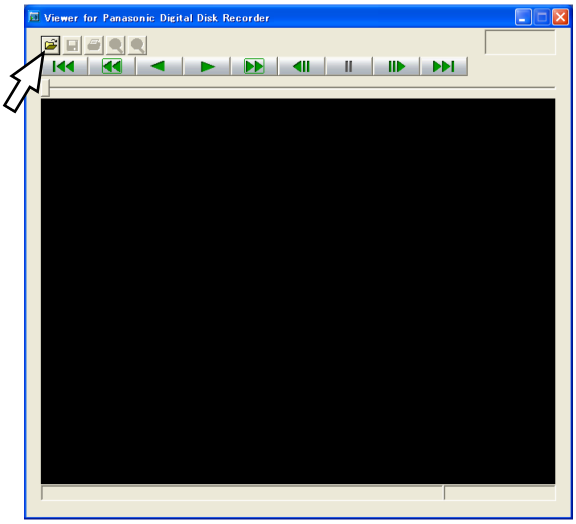
Step 3

Complete the uninstallation by following the instructions of the wizard.

Play the downloaded recorded images

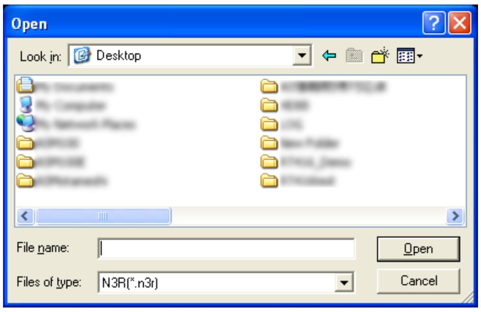
Step 1

Select "HD_Viewer" from the start menu ("Start" – "All programs" – "Panasonic" – "HD_Viewer") or double-click the HD_Viewer icon on the desktop.



Step 2

Click the [Open file] button.
→ The "Open" window will be displayed.



Look in: Desktop

[redacted]

File name:

Files of type: N3R(*.n3r)

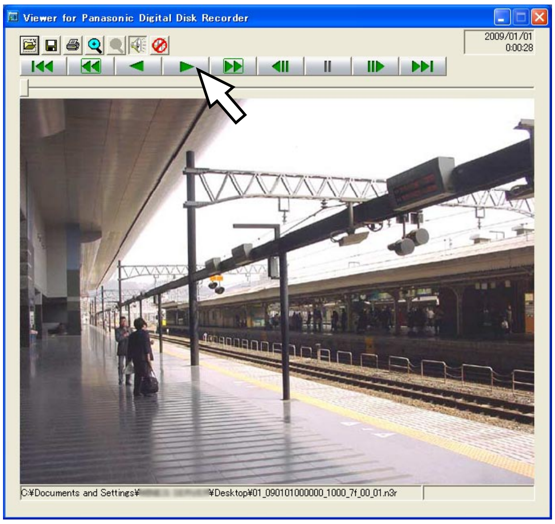
Step 3

Select the downloaded image data file (filename.n3r).

- It is possible to select two files or more (up to 32 files) by clicking the desired files while holding down the [Ctrl] key or the [Shift] key.
- To play audio data, the image data file "filename.n3r" and the audio data file "filename.n3a" are necessary to be saved in the same folder.

Step 4

Click the [Open] button.
→ The image data will be displayed.



2009/01/01
0:00:28

C:¥Documents and Settings¥[redacted]¥Desktop¥01_090101000000_1000_7f_00_01.n3r

Step 5

Click the [PLAY] button.
When playback finishes, a black screen will be displayed and paused.

Note:

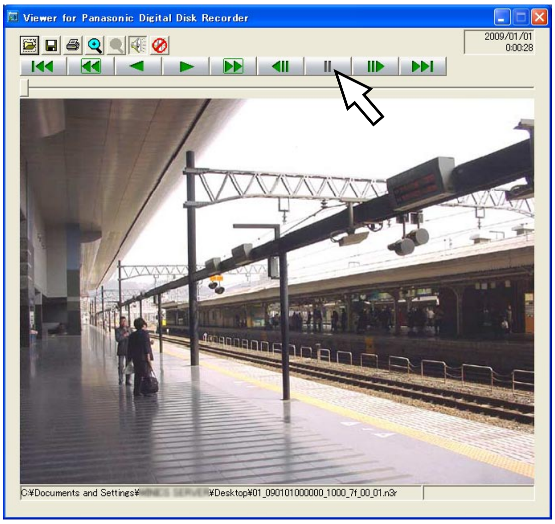
- It is possible to open an image file (extension: n3r) by dragging and dropping it onto the window of the viewer software.
- When two files or more are selected, it is possible to skip to play the previous/next file by clicking the [Previous file]/[Next file] buttons.
- When the [Zoom in] button is clicked, the displayed image will be enlarged two times.
- When performance of the PC in use is low, images may not be played smoothly.
- It is possible to turn on/off audio by clicking the [Speaker (audio on)] button and the [Speaker (audio off)] button.
- When a web browser, the viewer software and the HDD Viewer are running at the same time, audio may not be heard correctly.
- Run only one of the web browser, the viewer software and the HDD viewer software to play audio.
- Images may sometimes not be played synchronized with audio.

Save the displayed image

The currently displayed image can be saved on a PC as a JPEG file.

Step 1

Start operation when playing images using the viewer software.


Viewer for Panasonic Digital Disk Recorder
2009/01/01
0:00:28

C:¥Documents and Settings¥[redacted]¥Desktop¥01_090101000000_1000_7f_00_01.n3r

Step 2

Click the [PAUSE] button.

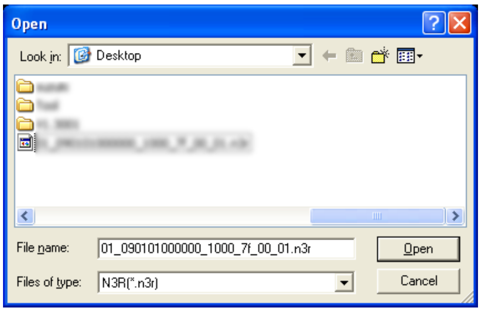
Step 3

Click the [SAVE] button.

→ The "Save As" window will be displayed.

Step 4

Enter the file name, and then select "JPEG (*.jpg)" for "Save as type".


Open
Open
Cancel

Look in: Desktop

[redacted]

File name: 01_090101000000_1000_7f_00_01.n3r

Files of type: N3R(*.n3r)

Step 5

Designate the folder and click the [Save] button.

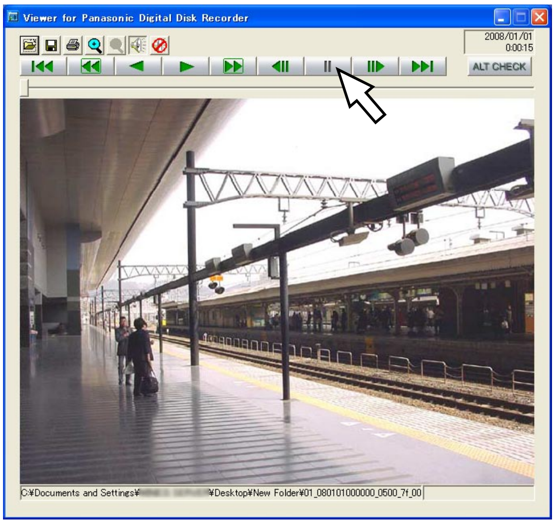
→ The image will be saved.

Print the displayed image

The image paused using the viewer software can be printed.

Step 1

Start operation when playing images using the viewer software.


Viewer for Panasonic Digital Disk Recorder
2008/01/01
0:00:15
ALT CHECK

C:¥Documents and Settings¥[redacted]¥Desktop¥New Folder¥01_080101000000_0500_7f_00

Step 2

Click the [PAUSE] button when the desired image is displayed.

Step 3

Click the [PRINT] button.

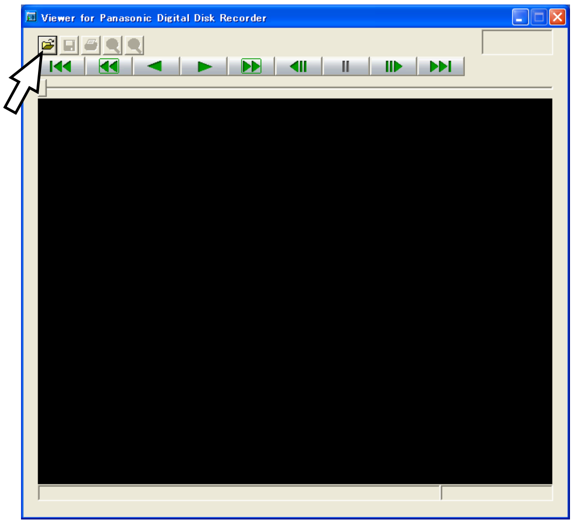
When printing an image whose extension is "n3r", the time and date when paused using the viewer software will be printed.

Alteration detection

It is possible to detect the alteration of the data if a code for the alteration detection has been attached to the downloaded data. Refer to the Installation Guide for how to attach the alteration detection code to data.

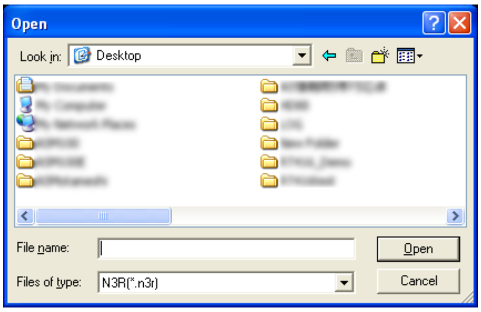
Step 1

Launch the viewer software and display the following window.


Viewer for Panasonic Digital Disk Recorder

Step 2

Click the [Open file] button.
→ The "Open file" window will be displayed.


Open
Open
Cancel

Look in: Desktop

File name:

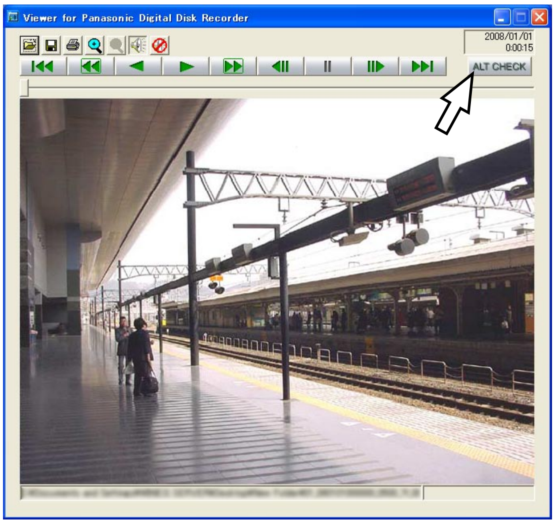
Files of type: N3R(*.n3r)

Step 3

Select the downloaded image data file (filename.n3r).

Step 4

Click the [Open] button.
→ The first frame of the image data will be displayed and paused.


Viewer for Panasonic Digital Disk Recorder
2008/01/01
0:00:15
ALT CHECK

Step 5

Click the [ALT CHECK] button.
→ The alteration detection will start.

The [ALT CHECK] button will be displayed only when the image data with the alteration detection code is displayed.
[OK (Not Altered)]: No alteration was detected.
[**NG (Altered)]:** Alteration was detected.

Operate the camera

It is possible to operate the following camera operations when displaying live images from a combination camera.

Panning/Tilting:	Adjust the horizontal/vertical position of images from the camera.
Zoom:	Zoom in/out images from the camera
Focus:	Adjust the focus of the camera.
Iris:	Adjust the lens iris of the camera
Preset position function:	Register preset positions and move the camera direction to the registered preset position.
Auto function:	Activate the auto function of the camera according to the settings of the camera

Note:

- The camera operation can be performed only when displaying images on a 1-screen on monitor 1.
- Depending on the model of the camera, some operations may not work.
- When a user with a higher user priority is operating at the same time, it may be impossible to operate the camera. Refer to the Installation Guide for further information about the priority.
- Refer to page 118 for how to display the setup page of the camera and configure the settings of the camera.

Panning/Tilting

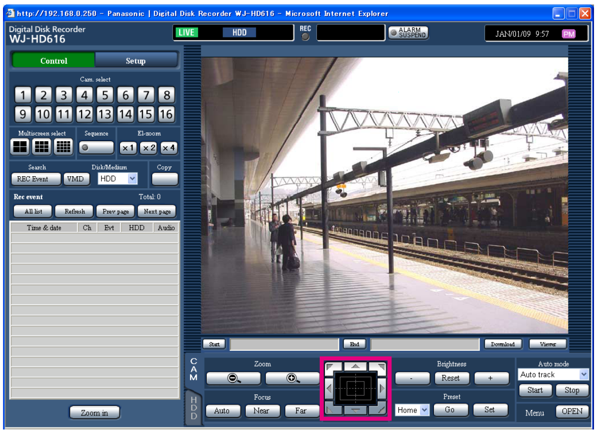
Adjust the horizontal/vertical position of images from the camera.

Step 1

Display the top page of the operation window.
(☞ Page 77)

Step 2

Display live images from the camera on a 1-screen, and then click the [CAM] tab.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
JAN/01/09 9:57
PM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: 0
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
Zoom
Focus
Auto
Near
Far
Brightness
-
Reset
+
Preset
Home
Go
Set
Auto mode
Auto track
Start
Stop
Menu
OPEN

→ The [CAM] tab will be displayed.

Step 3

Adjust the horizontal position and the vertical position of the camera (direction) by any of the following.

Control buttons: Click to move (pan/tilt) a camera in the clicked direction.

Control pad: Click to move (pan/tilt) a camera in the clicked direction. Panning/tilting speed will become faster if a clicked point gets farther from the center point of the control pad.

Image display area: Click the desired point to be located at the center of the angular field of view. The camera will move to locate the clicked point as the center point in the image display area.

Zooming

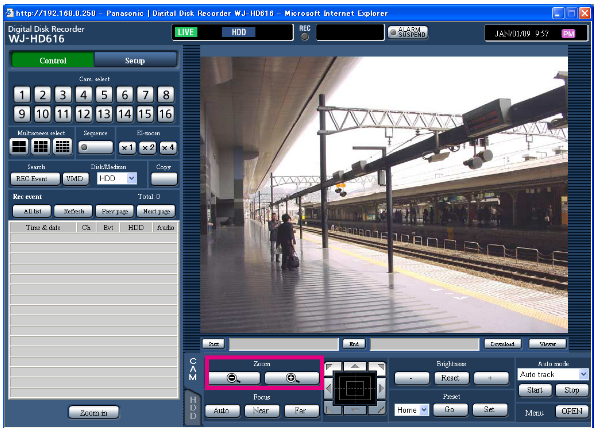
Zoom in/out images from the camera. Depending on the models of the connected cameras, the available zooming factors may be different. Refer to the operating instructions of the camera for further information.

Step 1

Display the [CAM] tab. (☞ Page 114)

Step 2

Zooming can be adjusted by clicking the [–] button (wide) or the [+] button (tele) in the [Zoom] box.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
JAN/01/09 9:57 PM
Control
Setup
Cam. select
Zoom
Focus
Auto
Near
Far
Brightness
Reset
Preset
Home
Go
Set
Auto mode
Auto track
Start
Stop
Menu
OPEN
Zoom in

Note:

- It is possible to adjust zooming using the mouse wheel.

Focus adjustment

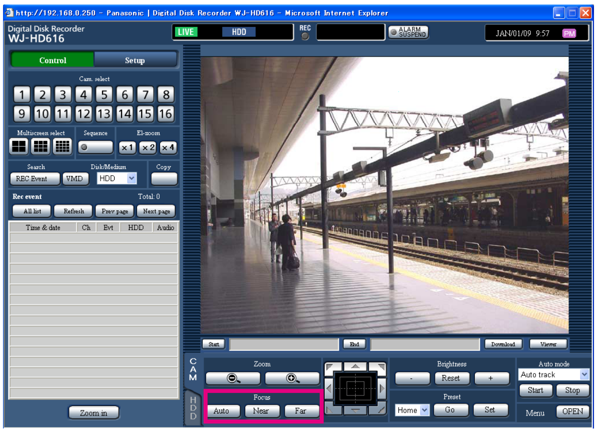
Adjust the focus of the camera. The auto focus function is available.

Step 1

Display the [CAM] tab. (☞ Page 114)

Step 2

Focusing can be adjusted by clicking the [Near] button or the [Far] button in the [Focus] box.
The auto focus function can be performed by clicking the [Auto] button.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder WJ-HD616
Zoom
Focus
Auto
Near
Far
Brightness
Preset
Auto mode
Menu
OPEN

Iris adjustment

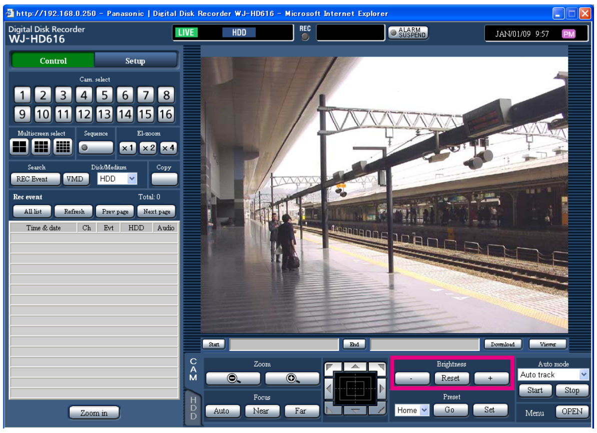
Adjust the lens iris of the camera

Step 1

Display the [CAM] tab. (☞ Page 114)

Step 2

The brightness (lens aperture) can be adjusted by clicking the [–] (darker) button or the [+] (brighter) button in the [Brightness] box. It is possible to reset the adjusted brightness by clicking the [Reset] button.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
JAN/01/09 9:57
PM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
EL-zoom
x1 x2 x4
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: 0
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
Zoom
Focus
Auto
Near
Far
Brightness
-
Reset
+
Preset
Home
Go
Set
Auto mode
Auto track
Start
Stop
Menu
OPEN

Preset position function

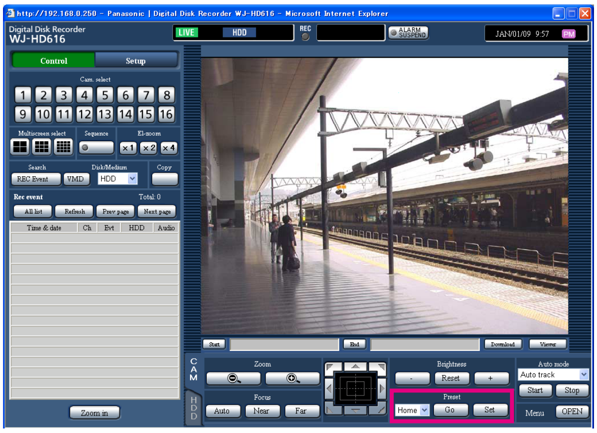
It is possible to register preset positions of the camera and to move the camera direction to the registered preset positions.

Step 1

Display the [CAM] tab. (☞ Page 114)

Step 2

Click the [▼] button, and then select the preset position number from the following.
Home, 1 - 256


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
JAN/01/09 9:57
PM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
EL-zoom
x1 x2 x4
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: 0
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
Zoom
Focus
Auto
Near
Far
Brightness
-
Reset
+
Preset
Home
Go
Set
Auto mode
Auto track
Start
Stop
Menu
OPEN

Step 3

When the [Register] button is clicked, the confirmation window will be displayed. The camera direction will be registered and assigned to the selected preset position number by clicking the [OK] button on the displayed confirmation window.

When the [Move] button is clicked, the camera direction will move to the preset position corresponding to the selected preset position number.

Note:

- It is impossible to register the position as "Home".
- Only users whose user level is allowed to control cameras or to configure the settings can register the preset positions.
- Refer to the operating instructions of the camera for the available preset position numbers.

Auto functions (Auto panning, etc.)

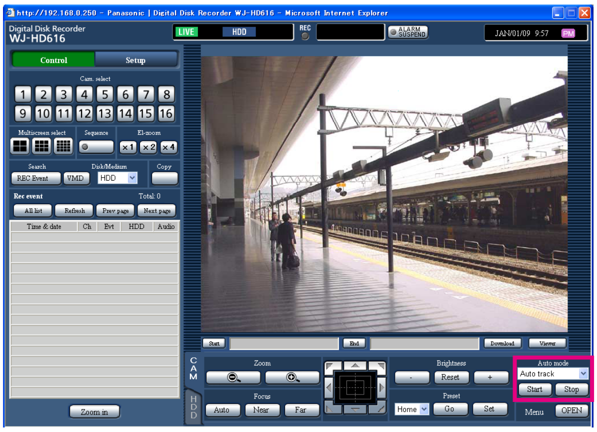
Activate the auto function of the camera according to the settings of the camera.

Step 1

Display the [CAM] tab. (☞ Page 114)

Step 2

Click the [▼] button in the [Auto mode] box, and then select the desired auto function from the following.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
JAN/01/09 9:57
PM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
Copy
Rec event
Total: 0
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
Zoom
Focus
Auto
Near
Far
Brightness
-
Reset
+
Preset
Go
Set
Auto mode
Start
Stop
Menu
OPEN

Disk/Medium: HDD

Preset: Home

Auto mode: Auto track

Auto track: The camera will automatically track an object moving on the screen.

Auto pan: The camera direction will automatically move (pan) between the start point and end point set in advance.

Preset sequence: The camera will move (pan) to the preset positions registered in advance in order of the preset position number (numerical order).

Sort: The camera will move (pan) counterclockwise to the preset positions registered in advance in order of the closest from the current position.

Patrol 1 - 4: The camera will trace the manually recorded panning pattern.

Step 3

Click the [Start] button to start the selected auto mode function.

Step 4

Click the [Stop] button to turn off the auto mode function.

Note:

- Each function of the auto mode is available only for combination cameras. Refer to the operating instructions of the camera for further information about the auto mode function of the camera.

Operate the setup menu of the camera

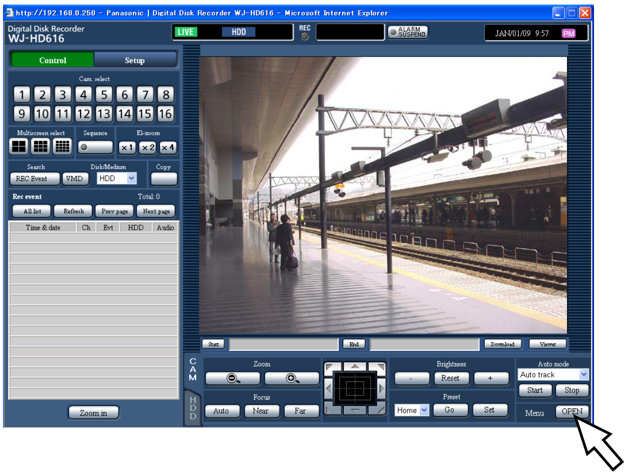
To control the camera connected to the recorder, it is necessary in advance to configure the settings of the camera function. The settings of the camera function can be configured on the setup menu of the camera.
It is possible to call the setup menu of the camera from a PC. The contents of the setup menu and the operation procedures vary depending on the model of the camera. Refer to the operating instructions of the camera for further information.
The following are descriptions of how to display the setup menu of the camera and of how to perform the basic operation.

Step 1

Display the [CAM] tab. (☞ Page 114)

Step 2

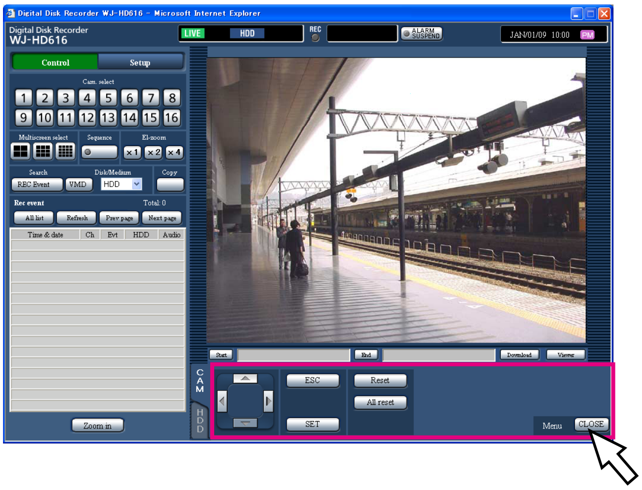
Click the [OPEN] button in the [Menu] box.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
JAN/01/09 9:57
Control
Setup
Cam. select
Multiscreen select
Sequence
El-zoom
Search
Disk/Medium
Copy
REC Event
VMD
HDD
Rec event
Total: 0
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
Zoom
Focus
Auto
Near
Far
Brightness
Reset
Preset
Home
Go
Set
Auto mode
Auto track
Start
Stop
Menu
OPEN

→ The setup window will be displayed and the setup menu of the camera will be displayed in the image display area.

Step 3

Operate the setup menu of the camera.


Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
JAN/01/09 10:00
Control
Setup
Zoom in
ESC
Reset
All reset
SET
Menu
CLOSE

To operate the setup menu of the camera, use the following buttons.

Move the cursor	Arrows button (▼ ▲ ◄ ►)
Change parameters	Arrows button (◄ ►)
Apply the set value or move to the lower level menu	[SET] button
Move to the higher level menu	[SETUP/ESC] button
Display the special menu	Click the [Reset] button after moving the cursor onto [SPECIAL] of the setup menu of the camera.
Reset the camera	Click the [Reset all] button after moving the cursor onto [CAMERA RESET] of the setup menu of the camera.

Step 4

To close the setup menu of the camera, click the [Close] button.

Note:

- When the camera has the refresh function (REFRESH), it is possible to execute the refresh function by clicking the [Reset] button.
- The camera setup window may sometimes remain displayed after the setup menu of the camera is closed such as when resetting the camera, etc. In this case, click the [Close] button of the camera setup window.
- Only users whose user level is allowed to control cameras or to configure the settings can configure the settings of the camera.

Disk management

On the [Disk] tab of "Maintenance" of the setup menu, it is possible to perform operation relating to the hard disk drives in the recorder or in an optional extension unit, DVD and SDHC/SD memory card.
The following are descriptions of how to delete images recorded on the hard disk drives and of how to format (initialize) a DVD or an SDHC/SD memory card from a PC.

Delete images recorded on the hard disk drives manually

The following are descriptions of how to manually delete images recorded in the normal recording area and the event recording area on the hard disk drives in the recorder.
By designating a time and date, all the images recorded until the day before the designated time and date will be deleted. It is useful to delete unnecessary images.

Important:

- Note that the deleted images cannot be recovered and the remaining disk capacity will not increase even though deletion is performed.

Note:

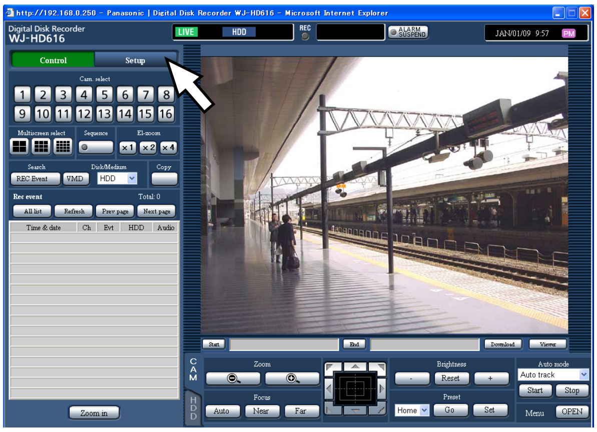
- It is possible to delete recorded images automatically when the set days have passed from the day the image was recorded (HDD auto deletion). Refer to the Installation Guide for further information.

Step 1

Display the top page of the operation window.
(☞ Page 77)

Step 2

Click the [Setup] button.


http://192.168.0.250 - Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
LIVE
HDD
REC
ALARM SUSPEND
JAN/01/09 9:57
PM
Control
Setup
Cam. select
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Multiscreen select
Sequence
El-zoom
×1 ×2 ×4
Search
REC Event
VMD
Disk/Medium
HDD
Copy
Rec event
Total: 0
All list
Refresh
Prev page
Next page
Time & date
Ch
Evt
HDD
Audio
Zoom in
Start
End
Download
Viewer
CAM
HDD
Zoom
Focus
Auto
Near
Far
Brightness
-
Reset
+
Preset
Home
Go
Set
Auto mode
Auto track
Start
Stop
Menu
OPEN

→ The setup menu will be displayed.

Step 3

Click the [Maintenance] button.

→ The [Product information] tab of "Maintenance" of the setup menu will be displayed.

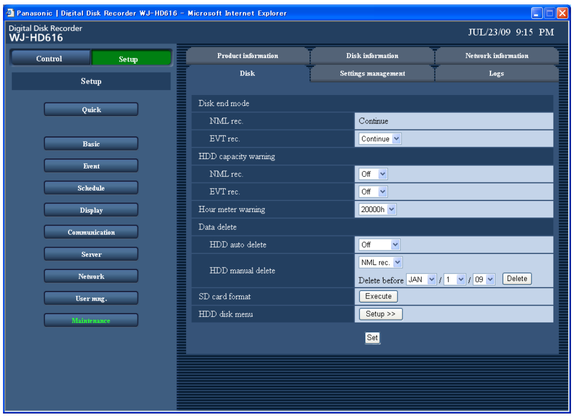
Step 4

Click the [Disk] tab.

→ The [Disk] tab will be displayed.

Step 5

Set time and date after selecting "NML rec." or "EVT rec." for "Data delete".
Images recorded until the day before the set date are subject to deletion.


Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
JUL/23/09 9:15 PM
Control
Setup
Setup
Quick
Basic
Event
Schedule
Display
Communication
Server
Network
User mng.
Maintenance
Product information
Disk information
Network information
Disk
Settings management
Logs
Execute
Setup >>
Delete
Set

Disk end mode	
NML rec.	Continue
EVT rec.	Continue
HDD capacity warning	
NML rec.	Off
EVT rec.	Off
Hour meter warning	20000h
Data delete	
HDD auto delete	Off
HDD manual delete	NML rec. Delete before JAN / 1 / 09
SD card format	Execute
HDD disk menu	Setup >>

Step 6

Click the [Execute] button.
→ The confirmation window will be displayed.

Step 7

Click the [OK] button.
→ Images recorded until the day before the set date will be deleted.

Format (initialize) an SDHC/SD memory card

To copy recorded images onto an SDHC/SD memory card, it is necessary in advance to insert an SDHC/SD memory card into the card slot of the recorder and format it. To delete recorded images on the SDHC/SD memory card, format the SDHC/SD memory card again.

Important:

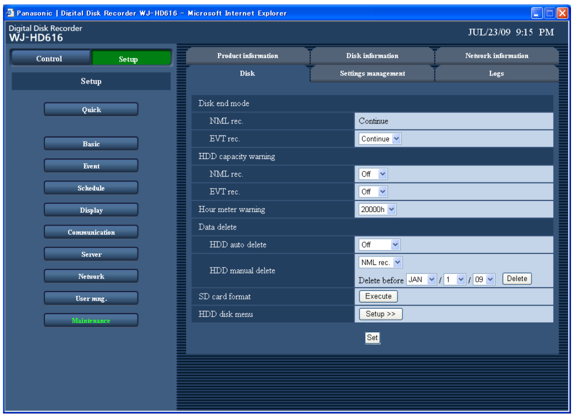
- When an SDHC/SD memory card is formatted, all recorded images and setup data on the SDHC/SD memory card will be deleted. It is impossible to recover the deleted images and audio.
- It is impossible to copy record images onto an SDHC/SD memory card formatted on a PC. Format the SDHC/
SD memory card on the recorder.

Step 1

Display the [Disk] tab. (☞ Pages 119 - 120)

Step 2

Click the [Execute] button of "SD card format".


Panasonic | Digital Disk Recorder WJ-HD616 - Microsoft Internet Explorer
Digital Disk Recorder
WJ-HD616
JUL/23/09 9:15 PM
Control
Setup
Setup
Quick
Basic
Event
Schedule
Display
Communication
Server
Network
User mng.
Maintenance
Product information
Disk information
Network information
Disk
Settings management
Logs
Delete
Execute
Setup >>
Set

Disk end mode	
NML rec.	Continue
EVT rec.	Continue
HDD capacity warning	
NML rec.	Off
EVT rec.	Off
Hour meter warning	20000h
Data delete	
HDD auto delete	Off
HDD manual delete	NML rec. Delete before JAN / 1 / 09
SD card format	Execute
HDD disk menu	Setup >>

→ The confirmation window will be displayed.

Step 3

Click the [Execute] button.
→ Formatting of the SDHC/SD memory card will start.

Important:

- Do not turn off the power of the recorder in the process of formatting.

Notification by e-mail

Alarm mail

A link address to the alarm image that is saved in the recorder contained in an alarm mail as follows.

Contents of the alarm mail:

In HD600 (192.168.0.250), alarm was occurred.

Alarm date:	xx-xxx-xxxx xx:xx:xx GMT xx:xx (Example: 01-JAN-2009 GMT +0:00)
Cause of alarm:	Displays an event type and a camera channel or an alarm number (Example: VMD ALARM 5ch)
File name of alarm image:	The file name of the image attached to an e-mail.
URL:	http://192.168.0.250/

Warning mail

The following mail will be sent to notify of a trouble occurrence to a registered address when the trouble occurs.

```
HD600 (192.168.0.250) STATUS REPORT
DATE: 2009-1-1 12:00:00
STATUS: The description of the trouble will be displayed. (Example: MAIN THERMAL
    ERROR)
```

Indication	Description
DATE	Time and date when the trouble occurred will be displayed.
STATUS	The description of the trouble will be displayed. Thermal error: THERMAL ERROR Alteration detection: ALTERED Lost of the recording area: "V-ERROR EVT" indicates a lost of the event recording area. "V-ERROR NML" indicates a lost of the normal recording area. "V-ERROR CPY" indicates a lost of the copy area. "V-ERROR PRE-XX" indicates a lost of the pre-event recording area (XX indicates camera channel number). HDD write error detection: DISK ERROR XX XX indicates disk number (sequential serial number) HDD S.M.A.R.T. warning: DISK WARNING XX XX indicates disk number (sequential serial number) HDD remaining capacity warning*1: <except FULL> HDD-NORMAL CAPACITY REMAINS **% HDD-EVENT CAPACITY REMAINS **% ** indicates the set value (%) - 1 <FULL> HDD-NORMAL IS FULL HDD-EVENT IS FULL HDD hour meter warning: HDD HOUR METER WARNING Power outage detection: POWER LOSS Auto remove of link: LOGICALLY REMOVED HDD XX XX indicates disk number (sequential serial number) 1DOWN Fan error: FAN ERROR Copy media error: MEDIUM ERROR Other errors: UNDEFINED ERROR HDD error: HDD-ERROR RAID recovery failure: RAID 5 RECOVERY FAILURE X-Y x indicates unit number, y indicates disk number

HDD remaining capacity warning

A warning mail with the <except FULL> content will be sent when the remaining disk capacity becomes less than the set value for "HDD capacity warning" in the "Maintenance" menu. After a warning mail is sent, a warning mail with the <except FULL> content will be sent each time 1% of the remaining disk capacity is reduced, and a warning mail with the <FULL> content will be sent when there is no remaining disk capacity.

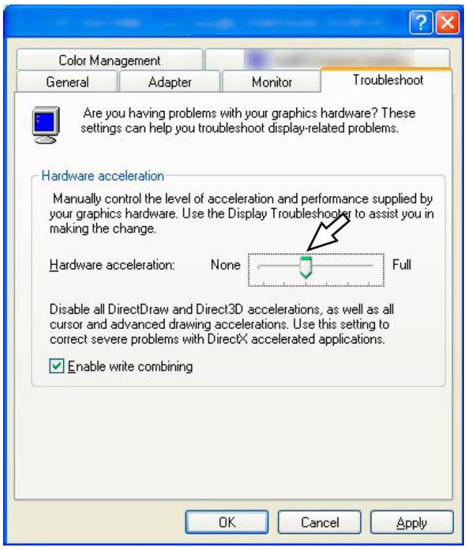
Troubleshooting

Before asking for repairs, check the symptoms with the following table.

Contact your dealer if a problem cannot be solved even after checking and trying the solution in the table or a problem is not described below.

Symptom	Cause/solution	Reference pages
Cannot access from the browser.	• Is the Ethernet cable firmly connected to the 10BASE-T/100BASE-TX port? Confirm the cable is firmly connected.	–
	• Is the connection indicator of the 10BASE-T/-100BASE-TX port lit? When it is not lit, connection to a LAN is not established or a network is not working correctly. Confirm that the connection indicator of the 10BASE-T/100BASE-TX port is lit. Refer to the system administrator if it is not lit.	–
	• Is the valid IP address set? Refer to a system administrator for further information about the settings.	Installation Guide
	• Are you accessing the wrong IP address? Check the connection as follows: >ping "IP address of this recorder" If there is reply from the recorder, the connection is normal. If not, check the settings of the IP address and the subnet mask.	–
	• Is the same IP address provided to other devices? Refer to a system administrator for further information about the settings.	Installation Guide
	• Are there contradictions between the address and the network subnet to be accessed? When the recorder and the client (PC) are on the same subnet, is the same subnet set for the IP addresses of the recorder and the PC? Or is "Use Proxy Server" for the settings of the browser checked? When accessing the recorder in the same subnet, entering the address of the recorder in the "Don't Use Proxy For These Addresses" box is recommended.	Installation Guide

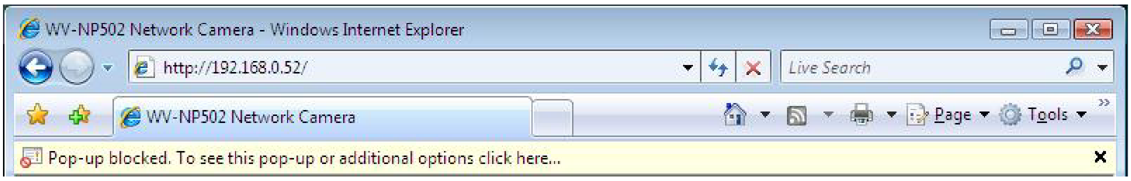
Symptom	Cause/solution	Reference pages
The image displayed on the browser is not being refreshed.	• Depending on the traffic of the network, there might be difficulties in displaying images. Press the [F5] button on the keyboard to request images.	–
Image refresh of the browser is slow. Response of the browser is slow.	• Isn't the network traffic heavy? These symptoms may occur when the network traffic is heavy.	–
A pop-up is not displayed on the browser.	• It may be possible that a pop-up blocker other than Internet Explorer is activating. Check the installed software and cancel the pop-up blocker.	–
Cannot close the authentication window displayed when displaying the basic operation window.	• Are the correct user name and password entered? Confirm the correct user name and password.	Installation Guide
Audio is interrupted during playback using the viewer software.	• When playing images recorded at a higher recording rate, audio may sometimes be played interrupted.	–
Cannot play the downloaded recorded images.	• When any setting of the setup menu has been changed during the download, the download will be canceled automatically. In this case, the downloaded file is not a complete file and it is impossible to play it.	–
No alarm action is taken.	• Isn't the alarm suspended? Cancel the alarm suspension.	58, 102
An error message is displayed when trying to launch the viewer software by dragging and dropping multiple files onto it.	• Try to launch by dragging and dropping fewer files or launch the viwer software first by double-clicking.	–

Symptom	Cause/solution	Reference pages
When displaying images on a multi-screen, images from two cameras or more are displayed in sequence on a screen of multi-screen	- This may occur due to the display adapter and driver combination. When this occurred, update the driver of the display adapter to the latest version first. If updating the driver does not solve the problem, adjust the hardware acceleration as follows. The following are descriptions when using Windows XP. 1. After closing all web browser windows, right-click on the desktop and select "Properties" from the displayed pop-up menu. 2. Select "Settings" from "Display Properties", and then click the [Advanced] button. 3. Click the [Troubleshoot] tab and disable the DirectDraw acceleration by adjusting the level of "Hardware acceleration"  Color Management General Adapter Monitor Troubleshoot Are you having problems with your graphics hardware? These settings can help you troubleshoot display-related problems. Hardware acceleration Manually control the level of acceleration and performance supplied by your graphics hardware. Use the Display Troubleshooter to assist you in making the change. Hardware acceleration: None — Full Disable all DirectDraw and Direct3D accelerations, as well as all cursor and advanced drawing accelerations. Use this setting to correct severe problems with DirectX accelerated applications. ☑ Enable write combining 	–

Message displayed on the information bar

Depending on the operation system in use, the following may occur. Follow the instructions below when the following occurred. By performing the following solutions, other applications may not be affected.

The "Information Bar" expressed in the following symptom and solutions will be displayed just below the address bar only when there is information to communicate.



Pop-up blocked. To see this pop-up or additional options click here...

Information Bar

Symptom	Solution	Reference pages
The following message is displayed on the information bar. "Pop-up blocked. To see this pop-up or additional options, click here..."	- Click the information bar and select "Always Allow Pop-ups from This Site". The dialog window saying "Allow pop-ups from this site?" will be displayed. Click the [Yes] button.	–
The following message is displayed on the information bar. "This site might require the following Active X control: 'wvasetup2.exe' from 'Panasonic Corporation'. Click here to install..."	- Click the information bar and select "Install ActiveX Control...". Click the "Install" button on the displayed "Security Warning" window.	–

Symptom	Cause/solution	Reference pages
The following message is displayed on the information bar. "To help protect your security, Internet Explorer blocked this site from downloading files to your computer. Click here for options..."	• Click the information bar and select "Download File...". When downloading fails even though you selected "Download File...", perform the following operation. Click "Internet Options" on the Tools menu of Internet Explorer, and then click the [Security] tab. Then, click the [Custom Level…] button to open the "Security Setting" window. Under "Downloads", select "Enable" for "Automatic prompting for file downloads". Then click the [OK] button. When the warning window is displayed, click the [Yes] button.	–
The following message is displayed on the information bar when tried to execute a downloaded file. "The publisher could not be verified. Are you sure you want to run this software?"	• Click the [Run] button.	–
Unnecessary status bar or scroll bar is displayed on the pop-up window. An URL is displayed on the pop-up title bar and the title is not displayed completely.	• Click "Internet Options" on the Tools menu of Internet Explorer, and then click the [Security] tab. Then, click the [Custom Level…] button to open the "Security Setting" window. Under "Miscellaneous", select "Enable" for "Allow script-initiated windows without size or position constraints". Click the [OK] button. When the warning window is displayed, click the [Yes] button.	–

Glossary

ActiveX Control
A software module developed by Microsoft. It is used to add functions, downloaded from a web server via the Internet or intranet, to Internet Explorer. The recorder uses it to display video.

DDNS (Dynamic DNS)
A technology for dynamically translating DNS server information to enable the transfer of only differences in information between DNS servers (refer to "DNS"). This reduces the data transfer amount necessary for updating information on the DNS server and reduces the load on the network.

DHCP (Dynamic Host Configuration Protocol)
A protocol that enables PCs to automatically get information from a server needed for accessing a network.

DNS (Domain Name System)
The long lists of numbers or IP addresses that are used in network environments are difficult to remember, which makes them impractical. This is why PCs are given an easy-to-follow name (domain name) which is converted to an IP address before they are communicated with. The DNS provides translation between domain names and IP addresses.

FTP (File Transfer Protocol)
A protocol that is commonly used for transferring files over the Internet.

HDD
Stands for Hard Disk Drive (a high capacity storage device). This product uses hard disk drives instead of video tapes for recording.

IP address (Internet Protocol Address)
The identification number assigned to PCs connected via IP networks such as the Internet or an Intranet, or to individual communications devices. Do not assign the same address to multiple devices, especially on the Internet.

LAN (Local Area Network)
A communications network for connecting PCs, printers and other network devices in a relatively small area such as in a building or floor of a building or campus in which data is transferred.

MAC address (Media Access Control address)
Fixed physical address assigned to network devices. Devices send and receive data based on this.

H.264
One of the compression methods of moving images.

NAT (Network Address Translation)
A technology for sharing a single global address between two or more PCs.

NTP (Network Time Protocol)
A protocol developed to accurately maintain time among hosts on the Internet.

PS·Data
Stands for Panasonic Security Data. When PS·Data compatible devices are connected using a RS485 cable, it is possible to operate the recorder from them or to operate them from the recorder.

QVGA
Resolution with 320 x 240 pixels.

POP 3
A protocol for receiving e-mail stored on a server on the Internet or an Intranet.

POP 3 Server
A server that supports POP3, currently the most widely used mail sending protocol.

RAID (RAID5)
An abbreviation for Redundant Arrays of Inexpensive Disks 5 that provides a highly reliable disk array by distributing access over multiple HDDs, increasing both speed and capacity. Even if one HDD has errors, data can be recovered based on error correction data recorded on other HDDs. (RAID 5 is used when 3 or more HDDs are connected. However, when 2 or more HDDs simultaneously have errors, data cannot be recovered.)

RAID (RAID6)
An abbreviation for Redundant Arrays of Inexpensive Disks 6 that provides a highly reliable disk array by distributing access over multiple HDDs, increasing both speed and capacity. Even if two HDDs have errors, data can be recovered based on error correction data recorded on other HDDs. (RAID 6 is used when 4 or more HDDs are connected. However, when 3 or more HDDs simultaneously have errors, data cannot be recovered.)

RS485
When this product is connected to the camera using the video cable and the RS485 cable, the electrical characteristics of RS485 can make this product to control the camera.

SD memory card (Secure Digital memory card)
A small, lightweight and removable storage device having a large capacity.

SMTP (Simple Mail Transfer Protocol)
A protocol for sending e-mail on the Internet or an Intranet. Used when transferring mail between servers or when clients send mail to the server.

SMTP server
A server that supports SMTP, currently the most widely used mail transfer protocol.

SMTP authentication (Simple Mail Transfer Protocol authentication)
SMTP mail transfer protocol appended with a user authentication function. It authenticates passwords and user accounts between SMTP servers and clients. Both SMTP servers and clients must support SMTP authentication.

SNMP (Simple Network Management Protocol)
A protocol for monitoring and managing networked communications devices, such as routers, PCs, cameras and Network Disk Recorders via a network.

TCP/IP (Transmission Control Protocol/Internet Protocol)
The standard network protocol for the Internet and Intranets.

URL (Uniform Resource Locator)
An address for locating information resources such as documents and images on the Internet.

VGA (Video Graphic Array)
Resolution with 640 x 480 pixels.

VPN
Service used to make public lines as private lines. Many companies are using this as a new medium of communication instead of costly private lines. Depending on service, VPN also provides a secure line using authentication technology and encryption.

WAN
Allows physically separated PCs, such as between the head office and a branch office, to connect via a phone line or private line data for exchanging.

Internet
A global system of interconnected computer networks. It is required to contract with an Internet service provider to connect to the Internet.

Event
Indicates an occurrence that causes the recorder to take an event action. Events include terminal alarm, command alarm, video motion detection (VMD), video loss, camera site alarm, etc.

Event action
A specific action to be taken at an event occurrence. There are 2 event action modes: the alarm mode (ALM) and the activity detection mode (ADM). The event action to be taken at an event occurrence varies depending on the selected event action mode. When "ALM" is selected, an event occurrence will be informed outside by displaying a notification on the monitor, lighting the LED, sounding the buzzer, etc. (alarm action) When "ADM" is selected, an event occurrence will not be informed outside and only recording and filing of event logs will be performed. When "Off" is selected, only filing of event logs will be performed.

Event recording
Recording automatically performed at an event occurrence.
Event recording includes the pre-event recording (records images before an event occurs) and post-event recording (records images after an event occurs).

Web browser
A software application which enables to display web pages. Microsoft Internet Explorer® is one of the most widely used web browser.

Video Motion Detection (VMD)
The function that automatically detects motion in images. In this product, it is possible to record images when detecting motion in live images and also to search for time and date of motion detection in recorded images (VMD search).

External recording mode
Use the external switch connected to the recorder to switch to time tables such as the recording settings and event action settings.

Image quality
This product compresses and records images from cameras. Image quality varies depending on the compression rate. In this product, the following image qualities (compression rates) are available and they can be selected for each camera channel and each recording mode. XF (Extra Fine: Highest quality), SF (Super Fine: Super high quality), FQ (Fine: High quality), NQ (Normal: Standard quality),EX (Extended: Low quality)

Resolution (Image capture size)
Generally indicates the smoothness of the image quality and the size of the images recorded from the camera. In this product, it indicates the number of dots used in the image displayed on the screen. A horizontal resolution of 720 dots and a vertical resolution of 480 dots is expressed as 720-480.

Camera operation
Operations of the camera connected to the recorder such as pan and tilt (horizontal and vertical position), zooming, focusing, brightness (iris adjustment), preset motions (movement towards a set horizontal and vertical position) and auto functions (automatic camera rotation, etc.).

Emergency recording
Gives priority to recording video and audio when an emergency occurs using the external switch connected to the recorder.

Global (IP) address
IP address assigned to each device connected to the Internet that is equivalent to an address on the Internet. IP address is required for Internet communications. In contrast, IP address freely available to assigned to each device within an intranet is called as "Private (IP) address".

Default gateway
Network device used as a gateway for networks, such as a local network, to access PCs on an external network. Data is sent using the default gateway if a gateway is not specified in the destination IP address.

Cable compensation
Generally, video signals will be attenuated when using a long cable to connect between the recorder and the camera. The cable compensation function compensates this attenuation. In this product, the cable compensation function compensates video signals from the cameras connected to the video input connectors 1 - 8 when using the WJ-HD616K (the video input connectors 1 - 16 when using the WJ-HD716K).

Combination camera (PTZ camera)
Indicates a camera with the panning/tilting and zooming function. Also known as PTZ camera.

Subnet
A small network used as a unit of administration when a larger network is divided into smaller networks. Large networks in corporations, for example, the network can be broken down into smaller networks called "subnets" to make the network more manageable and lines used more efficiently. In this case, these smaller networks are called subnets.

Subnet mask/Subnet prefix length
Subnet mask consists of 32-bit numeric values. According to the values, devices can determine which part of the address is the network address and which part is the host address.

Sequence
The function that can sequentially display images from cameras in order set in advance. In this product, the sequence can be performed during displaying live images.

Schedule recording
Function that automatically starts video and audio recording on a preset time schedule.

Secondary (DNS) server
DNS servers usually have more than 2 systems and the secondary server is the sub system.
If there is trouble with the primary server, the secondary server takes over.

Full duplex
Communications method that allows simultaneous sending and receiving by transmitting in both directions using an independent sending line and receiving line.

Time zone
A time zone is a region or a country that has uniform standard time.

Multiscreen display
This product can display images from multiple camera channels simultaneously while displaying live images or playback images. Displaying of images from 4 cameras or from 16 cameras simultaneously is called as "4-screen display" or "16-screen display" respectively.

Electronic zoom
The function that enlarges live images and playback images during playback. The electronic zoom enlarges the images by the recorder and is separate from the zoom function included as part of the camera operations for enlarged images.

Coaxial communication
This method is used to control the camera using the camera control signal through the cable connecting between the recorder and the camera. In this product, the cameras connected to the video input connectors 1 - 8 (1 - 16 for WJ-HD716K) can be connected using the coaxial communication.

Disk configuration (Disk config.)
It is necessary to configure the HDD settings after replacing, removing, or adding a HDD. "Disk config." is the menu for configuring the HDD.

Half duplex
Communications method that switches between sending and receiving using a single communications line.

Bit rate
Indicates how many bits of data can be processed or transmitted in a unit of time. Generally, the units are in bps, or bits per second. Used to indicate the compression rate of video and audio data, and how much data a communications line can send and receive in 1 second.

Firewall
A type of security used when accessing outside networks like the Internet. A PC is used to prevent computers outside a local network from accessing the network.

Private (IP) address
IP address assigned when connecting primarily to LAN. Private IP addresses can be assigned freely on a network and do not require a formal application. However, because private IP addresses cannot be used to access the Internet, a router or other device it is necessary to assign a global IP address.

Primary (DNS) server
DNS servers usually have more than 2 systems and the primary server is the main system.

Plug-in software
Small programs used to add functions to application software.

Broadband router
Router used to access the Internet via high-speed ADSL or fiber optic lines.

Protocol
A set of rules that allows the exchange of data amongst different types PCs with information.
The Internet uses the TCP/IP protocol as its base and information is transferred following http and ftp protocols depending on the application.

Port number
A sub address set below the IP address to connect multiple parties simultaneously for communication (TCP, UDP, etc.) on the Internet.

Hold playback speed
It is possible to change the playback speed during playback by rotating the shuttle ring. The hold playback speed function can keep the playback speed even after releasing the shuttle ring.

Manual recording
Click the [Recording] button and the [Recording stop] button to manually start and stop recording of video and audio.

Router
Placed in between different networks, a router sends data to the proper destination via network. If data on the network is addressed to an external network, routers send the data to the outside of the network after judging the optimum sending route.

Recording rate (ips)
Unit that determines the smoothness when recorded images are played back. "ips" indicates the number of recorded frames in 1 second. When the recording rate is higher, the playback is smoother, but available recording time is reduced.

For U.S., Canadian and Puerto Rican fields:

Panasonic System Solutions Company,
Unit Company of Panasonic Corporation of North America
www.panasonic.com/business/
For customer support, call 1.800.528.6747
Three Panasonic Way 2H-2, Secaucus, New Jersey 07094

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Importer's name and address to follow EU rules:

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